Administrative County of Middlesex.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

FOR THE

YEAR 1945.

LONDON:
PRINTED AND SOLD BY P.S. KING & SON, LTD., ORCHARD HOUSE, WESTMINSTER.
Printers to the Majesty the King.

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TO THE CHAIRMAN, ALDERMEN AND MEMBERS OF THE COUNTY COUNCIL OF MIDDLESEX.

SIR, LADIES AND GENTLEMEN,

I have the honour to present my Annual Report upon the public health of Middlesex and the health services of the County Council for the year 1945.

The year, which saw the end of the war both in Europe and later in Asia, closed an epoch in the history of this country. Opportunity is taken in this Report to review some of the services which were maintained and even expanded during the war. In this regard attention is particularly directed to the section on Tuberculosis, contributed by Dr. Garland.

The health of the County, as revealed by a study of the vital statistics, was very good. No serious outbreaks of epidemic illness occurred and it is indeed gratifying to be able to report a new low record for Middlesex in the death-rate from tuberculosis (all forms) and in the maternal mortality rate which was a fraction below 1 per 1,000 live births. The maternal death rates from sepsis and from causes other than sepsis constituted new low records as did the still-birth rate for the County.

Some interesting developments in the general hospital service, perhaps foreshadowing the shape of things to come, are set out in the " General Hospitals " section of the Report. They include an entirely new structure of medical staffing of the County hospitals; the outline of a scheme of co-operation with Charing Cross Hospital, embracing hospital services and medical education; and a liaison with the Middlesex Hospital for the provision of a radiotherapy service for the whole County.

It is again my pleasure to place on record and gratefully to acknowledge the help I have received from my staff and particularly from my deputy, Dr. A. C. T. Perkins.

I have the honour to be,

Your obedient servant,

H. M. C. MACAULAY,

County Medical Officer.

PUBLIC HEALTH DEPARTMENT,
10, GREAT GEORGE STREET,
WESTMINSTER, S.W.1.
June, 1947.

STAFF.

County Medical Officer of Health and School Medical Officer :

H. M. C. Macaulay, M.D., B.S., B.Sc., D.P.H., K.H.P.

Deputy County Medical Officer of Health and Deputy School Medical Officer :

A. C. T. Perkins, *M.C.*, M.D., B.S., D.P.H.

Principal Assistant Medical Officers :

Miss M. Back, M.D., B.S., D.P.H.
J. O. F. Davies, M.D., B.S., D.P.H., D.R.C.O.G.
J. B. Ewen, M.D., Ch.B., D.P.H.
T. O. Garland, M.A., M.D., B.Ch., D.P.H.

Tuberculosis Medical Officers :

O. Bruce, M.R.C.S., L.R.C.P.
S. Trevor Davies, M.R.C.S., L.R.C.P.
V. Feldman, M.D., M.R.C.P., D.P.H.
A. S. Hall, M.A., M.B., M.R.C.P.
R. Heller, M.D. (acting).
G. G. Kayne, M.D., M.R.C.P., D.P.H., (Died June, 1945).
N. Macdonald, M.B., Ch.B., M.R.C.P.
J. T. N. Roe, M.D., Ch.B., D.P.H.
B. C. Thompson, M.A., M.D., B.Ch.

Assistant Tuberculosis Officers :

W. Pointon Dick, M.R.C.S., L.R.C.P.
F. C. N. Holden, M.B., B.S.
H. W. Rees, M.R.C.S., L.R.C.P.

Assistant Medical Officers :

(*Maternity and Child Welfare and School Medical Services.*)

Mrs. A. M. Burn, M.B., Ch.B., D.P.H. (Resigned Jan., 1945).
Miss J. R. Campbell, M.B., Ch.B., D.P.H.
Miss M. L. Campbell, M.B., B.Ch., B.A.O., D.P.H.
Mrs. D. L. Carter, M.B., B.S.
Mrs. F. E. Court, M.B., Ch.B. (Resigned Oct., 1945).
Miss K. Glyn-Jones, M.R.C.S., L.R.C.P.
Miss M. M. Goudie, M.B., Ch.B. (Appointed Nov., 1945).
‡§Miss P. G. Holman, M.R.C.P., D.P.M.
R. A. Jones, M.B., Ch.B., B.Sc., D.P.H.
Mrs. R. A. Low-Beer, M.D. (Resigned Dec., 1945).
Miss E. M. Malmberg, M.B., B.S., D.P.H.
Mrs. L. A. Matheson, M.B., Ch.B. (Appointed Oct., 1945).
*G. B. Matthews, M.R.C.S., L.R.C.P. (Resigned Nov., 1945).
H. W. Moir, M.B., Ch.B., D.P.H.
Miss M. M. O'Connor, M.R.C.S., L.R.C.P., D.P.H. (Transferred to Southall, July, 1945).
Mrs. M. M. Osborn, M.R.C.S., L.R.C.P.
Mrs. E. G. Porter, M.R.C.S., L.R.C.P., D.P.H.
§Miss P. M. Rex, M.R.C.S., L.R.C.P.
†Miss M. K. Ruddy, M.D., B.S., B.Sc.
‡Miss M. V. Saul, M.B., B.S., D.P.M.
§Mrs. E. Shannon, M.B., Ch.B.
Mrs. R. H. Shelley, M.B., B.S.
Miss E. S. Stephen, M.B., Ch.B., D.P.H.
J. R. Tibbles, M.B., Ch.B., D.P.H. (Transferred to Wembley, July, 1945).
Miss C. I. Wright, M.D., B.S., D.P.H.

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* In H.M. Forces. † Psychiatrist, Middlesex Education Committee.
‡ Asst. Psychiatrist, Middlesex Education Committee. § Part-time.

Senior Dental Officer:

J. F. Pilbeam, L.D.S.

Dental Officers :

Mrs. E. R. Banowitz, M.D. (Transferred to Wembley, July, 1945).
Mrs. J. Bard, L.D.S. (Resigned Mar., 1945).
Miss A. Brodie, L.D.S. (Transferred to Harrow, July, 1945).
Miss I. M. M. Cameron, L.D.S. (Transferred to Southall, July, 1945).
H. Canton, L.D.S. (Resigned Dec., 1945).
*A. S. Carr, L.D.S.
*S. E. Charman, L.D.S.
*R. E. Cook, L.D.S.
G. M. Davie, L.D.S.
H. Deutsch, M.D. (Transferred to Harrow, July, 1945).
Mrs. A. M. Ferry, L.D.S.
†Mrs. C. M. Figgis, L.D.S.
†Miss F. M. Goodman, L.D.S. (Transferred to Harrow, July, 1945).
W. G. C. Hackman, L.D.S.
Miss I. Halsall, L.D.S.
Miss G. Hamburger, L.D.S. (Transferred to Harrow, July, 1945).
D. D. Hamilton, L.D.S.
Mrs. E. S. Iversen, L.D.S. (Resigned Oct., 1945).
Mrs. E. M. Jones, L.D.S.
*F. Jones, L.D.S.
†A. Kraus, M.D. (Services terminated, Dec., 1945).
†Mrs. E. Leggett, L.D.S. (Resigned, Dec., 1945).
W. A. Lilley, B.D.S., L.D.S.
*F. J. Lord, L.D.S.
*S. A. McLaren, L.D.S.
Miss M. A. Macdonald, L.D.S. (Appointed Nov., 1945).
L. C. Mandeville, L.D.S. (Reinstated Oct., 1945).
*R. S. Matthew, L.D.S.
R. Maxwell, L.D.S. (Resigned Apr., 1945).
R. Nuki, M.D.
E. Plessner, M.D.
Mrs. T. Schroetter, M.D.
†Miss G. M. Seal, L.D.S. (Appointed Sept., 1945).
Mrs. G. M. Shalders, L.D.S. (Transferred to Harrow, July, 1945).
E. Sharp, L.D.S. (Resigned June, 1945).
Mrs. F. M. Sievers, L.D.S. (Transferred to Harrow, July, 1945).
Miss E. M. Young, L.D.S. (Transferred to Wembley, July, 1945).

Orthodontist :

†Miss K. C. Smyth, L.D.S.

Assistant Orthodontists :

†Mrs. C. M. Figgis, L.D.S. (Appointed Feb., 1945).
Mrs. M. C. Strange, L.D.S. (Appointed Oct., 1945).

Non-medical Supervisor of Midwives :

Miss L. B. Young, S.R.N., S.C.M.

Assistant Supervisor of Day Nurseries :

Miss J. M. Akester, S.R.N., S.C.M., D.N.

Special Services Almoners :

Miss D. Myer.
Mrs. F. C. Carling (Appointed Sept., 1945).

Tuberculosis Visitors	30
Tuberculosis Welfare Officers and Assistant Welfare Officers	11
Health Visitors and School Nurses	49
Dental Nurses and Dental Attendants	18
Midwives	30

Ambulance Officer for Civil Defence :

C. H. Oliver, Barrister at-Law.

Ophthalmic Surgeons (part time) *:*

(Maternity and Child Welfare, School Medical Service, Certification of Blind Persons)

Miss A. L. Adam, M.B., B.S., D.O.M.S.
J. M. Bickerton, M.A., B.Ch., F.R.C.S. (Resigned June, 1945).
C. J. L. Blair, M.R.C.S., L.R.C.P.
Miss Jean M. Dollar, M.S., F.R.C.S., D.O.M.S.
R. E. Henry, M.B., Ch.M., D.O.M.S.
Miss E. Howes, M.R.C.S., L.R.C.P.
Miss C. Orr-Ewing, D.O.M.S. (Transferred to Southall, July, 1945).
J. Joels, M.B., Ch.B., D.O.M.S.
*E. F. King, M.B., Ch.B., F.R.C.S., D.O.M.S.
*N. H. L. Ridley, M.A., M.B., B.Chir., F.R.C.S.
*C. D. Shapland, M.B., B.S., M.R.C.P., F.R.C.S.
*H. H. Skeoch, M.B., Ch.M., F.R.C.S., D.O.M.S.
C. Yow, M.D., Ch.B.

* In H.M. Forces. † Part-time.

HOSPITALS.*

North Middlesex County Hospital.

Medical Director :
Ivor Lewis, M.D., M.S., D.P.H.

Physicians :
R. Kempthorne, M.A., B.M., B.Ch., M.R.C.P.
V. L. Collins, M.D., M.R.C.P., D.C.H.

Obstetric Surgeons :
‡K. A. Hudson, M.B., Ch.M., M.R.C.O.G.
A. W. Purdie, M.B., Ch.B., F.R.F.P. & S., M.R.C.O.G.
D. Friedlander, M.B., Ch.B., M.R.C.O.G.

Surgeons :
H. O. Blauvelt, M.D., C.M., F.R.C.S.
H. W. Hall, M.B., B.S., F.R.C.S.

Pathologists :
T. H. C. Benians, F.R.C.S. (part-time)
1 Vacancy.

Anœsthetists :
Miss N. I. Faux, M.B., B.S., D.A., D.P.H.
1 vacancy.

Assistant Medical Officers : 7.

House Officers : 4.

Matron :
Miss D. G. Rootham.

Redhill County Hospital.

Medical Director :
J. N. Deacon, *M.C.*, M.B., B.S.

Physicians :
G. H. Jennings, M.A., M.D., M.R.C.P.
L. I. M. Castleden, M.D., M.R.C.P.

Obstetric Surgeons :
E. ap. I. Rosser, M.B., B.S., M.R.C.O.G.
Mrs. M. Rose, M.B., B.S., M.R.C.O.G,

Surgeons :
D. B. Craig, F.R.C.S., D.L.O.
F. Forty, M.B., B.S., F.R.C.S.
R. Trevor Jones, B.Sc., M.B., B.S., F.R.C.S. (part-time)

Pathologist :
J. L. Hamilton-Paterson, M.D., B.S.

Anæsthetist :
‡J. H. Attwood, M.B., B.S., D.A.

Assistant Medical Officers : 10.

House Officers : 2.

Matron :
Miss E. R. Wheeldon.

Central Middlesex County Hospital.

Medical Director :
H. Joules, M.D., F.R.C.P.

Physicians :
‡F. Avery Jones, M.D., F.R.C.P.
R. A. J. Asher, M.B., B.S., M.R.C.P.
J. Sakula, M.D., M.R.C.P., D.C.H.

Obstetric Surgeons :
J. S. MacVine, M.B., B.S., F.R.C.S., M.R.C.O.G.
Miss M. A. M. Bigby, M.D., M.R.C.O.G.

Anæsthetists :
Miss M. McClelland, M.B., B.S., D.A.
Miss S. Ransom, M.R.C.S., L.R.C.P., D.A.

Surgeons :
T. G. I. James, B.Sc., M.Ch., F.R.C.S.
J. D. Fergusson, B.A., M.B., B.Chir., F.R.C.S.
C. F. Chapple, M.B., B.S., F.R.C.S.

Pathologists :
†J. D. A. Gray, B.Sc., M.B., Ch.B., F.R.C.P., D.P.H.
W. Pagel, M.D.
J. H. Humphrey, B.A., M.B., Ch.B.

Assistant Medical Officers : 7.

Matron :
Miss E. S. Laing.

* Staff as on 31st December, 1945.
† In H.M. Forces.
‡ Deputy Medical Director.

Hillingdon County Hospital.

Medical Director :
W. A. Steel, M.D., F.R.C.P.

Physicians :
‡E. B. Jackson, M.D., M.R.C.P.
C. R. Baxter, M.B., M.R.C.P.

Surgeons :
L. Fatti, M.B., B.S., F.R.C.S.
G. W. Duncan, M.B., B.S., F.R.C.S.
H. G. Hanley, M.D., F.R.C.S.

Obstetric Surgeon :
Miss J. Morgan, M.D., M.R.C.O.G.

Anæsthetist :
H. J. V. Morton, M.A., M.D., D.A.

Pathologist :
J. S. B. Bray, B.A., M.R.C.S., L.R.C.P., D.C.P.

Assistant Medical Officers : 6.

Matron :
Miss E. Hagland.

West Middlesex County Hospital.

Medical Director :
Vacancy.

Deputy Medical Director :
Miss M. W. Warren, M.R.C.S., L.R.C.P.

Physicians :
M. M. Deane, M.B., B.S., M.R.C.P., D.P.M., D.A.
J. A. Torrens, M.D., F.R.C.P.
F. J. V. Jenner, M.R.C.P.
Miss M. Dynski-Klein, M.D., D.C.H.

Surgeons :
W. J. Ferguson, M.S., F.R.C.S.
J. Scholefield, M.B., Ch.B., F.R.C.S.

Obstetric Surgeons :
D. M. Stern, M.A., F.R.C.S., M.R.C.O.G.
Miss I. M. Titcomb, M.A., B.M., B.Ch., M.R.C.O.G.
C. W. F. Burnett, M.D., M.R.C.O.G.

Pathologists :
A. C. Spence, M.R.C.S., L.R.C.P.
A. C. Counsell, M.B., B.S., D.P.H.

Anæsthetists :
Vacancy.
Miss E. M. Chivers, M.B., Ch.B., D.A.

Assistant Medical Officers : 11.

House Officers : 4.

Matron :
Vacancy.

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§Chase Farm Emergency Hospital.

Medical Director :
R. L. Galloway, M.B., Ch.B., F.R.C.S.

Physician :
‡C. A. Birch, M.D., F.R.C.P., D.P.H., D.C.H.

Assistant Medical Officers : 2.

House Officers : 8.

Matron ;
Miss G. M. Jones.

§Ashford County Hospital.

Medical Director :
G. Stephen, M.B., Ch.B., F.R.C.S.

Deputy Medical Director :
A. B. McLean, M.B., B.S.

Surgeon :
N. M. Matheson, M.B., B.Ch., F.R.C.S., M.R.C.P.

Physician :
A. Barham Carter, M.D., M.R.C.P., D.P.M.

Assistant Medical Officers : 2.

House Officers : 4.

Matron :
Vacancy.

---

‡ Deputy Medical Director.

§ The additional medical staff of this emergency hospital is provided by the Emergency Medical Service.

EDGBURY CONVALESCENT HOME, WOBURN SANDS.

Medical Officer (part-time) :
J. Richardson, M.B., B.Chir., M.R.C.S., L.R.C.P.

Matron :
Miss L. W. Orchard.

COUNTY CONVALESCENT HOSPITAL, THE DRIVE, UXBRIDGE.

Medical Director :
W. A. Steel, M.D., F.R.C.P.

Matron :
Miss A. B. Caskie.

*HAREFIELD COUNTY HOSPITAL.

Medical Director :
K. R. Stokes, M.R.C.S., L.R.C.P.

Physicians :
‡L. E. Houghton, M.A., M.D.
J. C. Roberts, M.D., M.R.C.P.

Pathologist :
E. Nassau, M.D.

Assistant Medical Officers : 6. *House Officers :* 4.

Matron :
Miss B. A. Shaw.

CLARE HALL COUNTY HOSPITAL, SOUTH MIMMS.

Medical Director :
F. A. H. Simmonds, M.A., M.D., B.Chir., D.P.H.

Physician :
‡A. G. Hounslow, M.D., B.S.

Surgeon :
R. Laird, Ch.M., F.R.C.S.

Assistant Medical Officers : 7.

Matron :
Miss A. R. Spall.

DANESBURY MANOR CONVALESCENT HOME, WELWYN, HERTS.

Medical Director :
F. A. H. Simmonds, M.A., M.D., B.Chir., D.P.H.

Matron :
Miss E. M. Watts.

GRIM'S DYKE CONVALESCENT HOME.

Medical Director :
L. E. Houghton, M.A., M.D.

Matron :
Miss E. Siddall.

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* The additional medical staff of this emergency hospital is provided by the Emergency Medical Service.
‡ Deputy Medical Director.

SUMMARY OF IMPORTANT STATISTICS RELATING TO THE ADMINISTRATIVE COUNTY OF MIDDLESEX.

Area (including inland water)			148,691 acres.
Population 1931 (census)			1,638,728
,, 1945			1,958,000
Number of structurally separate dwellings occupied, 1931 (census) ...			348,595
Number of private families, 1931 (census)			431,368
Rateable value			£21, 852,530
Product of a penny rate, financial year			£88,358
Live births—	Males.	Females.	Total.
Legitimate	16,000	15,042	31,042
Illegitimate	1,199	1,157	2,356
Birth-rate...			17·1
Stillbirths			795
,, Rate per 1,000 total births...			23·3
Deaths			20,523
Death-rate			10·5
Number of women dying from diseases and accidents of pregnancy and childbirth :—			
From sepsis			9
From other causes			24
Maternal mortality rate per 1,000 live births			0·99
,, ,, ,, ,, total ,, ...			0·97
Infantile mortality rate per 1,000 live births :—			
Legitimate			37·7
Illegitimate			53·5
Total			38·8
Deaths from cancer (all ages)			3,590
,, measles (all ages)			28
,, whooping cough (all ages)			14
,, diarrhœa (under 2 years of age)			134

Administrative County of Middlesex.

ANNUAL REPORT OF THE COUNTY MEDICAL OFFICER FOR THE YEAR 1945.

NATURAL AND SOCIAL CONDITIONS.

AREA.—The area of the County of Middlesex, inclusive of inland water, is 148,691 acres.

There are no county boroughs in Middlesex, so that the area of the administrative county coincides with that of the geographical county.

There are 26 separate local government areas in the County as follows :—15 municipal boroughs with an area of 70,196 acres and 11 urban districts with an area of 78,495 acres. There are no rural districts in the County.

POPULATION.—The estimated population in 1945 was 1,958,000, an increase of 55,500 on the previous year. The chief cause of this rise was doubtless the return of considerable numbers of children and other persons who had left the County for safer areas during the war years and possibly to a lesser extent the commencement of the demobilisation of members of the armed forces.

In the absence of other estimates, it has again been necessary to use the population figures provided by the Registrar-General for the calculation of death rates or the incidence of notifiable diseases among civilians, for the calculation of birth-rates in 1945.

The following table gives statistical information regarding the distribution of acreage and estimated population within the administrative county :

ACREAGE AND POPULATION.

Boroughs and Urban Districts.	Acreage.	Population.							
		Census.		Censal Increase or Decrease 1921–1931.					Estimated by Registrar-General, 1945.
				Persons.		Percentage.			
		1921.	1931.	Increase.	Decrease.	Increase.	Decrease.		
Acton (*Borough*)	2,318	60,817	70,008	9,191	—	15·1	—		57,200
Brentford and Chiswick (*Borough*)...	2,333	58,499	63,217	4,718	—	8·1	—		50,690
Ealing (*Borough*)	8,783	90,312	116,771	26,446	—	29·3	—		160,830
Edmonton (*Borough*) ...	3,896	66,807	77,658	10,851	—	16·2	—		93,530
Enfield	12,401	60,464	67,752	7,288	—	12·1	—		94,690
Feltham	4,925	11,392	16,064	4,672	—	41·0	—		35,670
Finchley (*Borough*)... ...	3,475	46,628	59,113	12,440	—	26·7	—		61,370
Friern Barnet	1,340	17,137	22,715	5,623	—	32·8	—		25,750
Harrow	12,559	49,020	96,656	47,636	—	97·2	—		191,710
Hayes and Harlington ...	5,160	9,042	22,969	13,927	—	154·0	—		60,660
Hendon (*Borough*) ...	10,373	57,566	115,640	58,074	—	100·9	—		137,770
Heston and Isleworth (*Borough*)...	7,219	47,463	76,254	28,791	—	60·7	—		95,100
Hornsey (*Borough*)... ...	2,872	87,632	95,416	7,784	—	8·9	—		78,660
Potters Bar	6,129	3,222	5,720	2,498	—	77·5	—		14,270
Ruislip-Northwood ...	6,583	9,112	16,035	6,923	—	76·0	—		56,950
Southall (*Borough*) ...	2,606	30,165	38,839	8,674	—	28·8	—		49,880
Southgate (*Borough*) ...	3,763	39,525	56,063	16,538	—	41·8	—		64,970
Staines	8,273	17,060	21,336	4,276	—	25·1	—		33,500
Sunbury	5,608	9,904	13,451	3,547	—	35·8	—		19,760
Tottenham (*Borough*) ...	3,013	146,726	157,667	10,941	—	7·5	—		110,600
Twickenham (*Borough*) ...	7,013	69,948	79,299	5,114	—	14·7	—		91,920
Uxbridge	10,240	20,626	31,887	11,261	—	54·6	—		45,080
Wembley (*Borough*) ...	6,292	18,239	65,799	47,560	—	260·8	—		117,900
Willesden (*Borough*) ...	4,633	165,742	185,025	19,296	—	11·6	—		148,030
Wood Green (*Borough*) ...	1,607	50,791	54,308	3,517	—	6·9	—		44,940
Yiewsley and West Drayton	5,277	9,163	13,066	3,903	—	42·6	—		16,570
The County	148,691	1,253,002	1,638,728	385,726	—	30·8	—		1,958,000

Social Conditions.—No major change has occurred during 1945 in the social conditions prevailing in the County, but the publication of the Abercrombie Plan for Greater London gave some indication of the shape of things to come and the County Council during the year gave preliminary consideration to the implementation of the report so far as it affects Middlesex.

Broadly speaking, the main interest of the report from the point of view of residents in the County, lies in the proposals for decentralisation of population. Of the 415,000 persons proposed to be decanted from the inner urban ring, 167,446 would be from Middlesex. Of these, it is anticipated that some 27,000 should be accommodated in less congested areas within the County, leaving something like 140,500 to be dispersed further afield. Thus it would appear that while no very great overall reduction in the population of Middlesex is foreshadowed in the near future, a limit has at least been set upon its further expansion. Moreover, it may be anticipated that the redistribution of population within the County should result in a general improvement in the amenities such as open spaces and recreational facilities, available in those districts lying within the inner urban ring.

The proposals of the Abercrombie plan with regard to communications, if implemented, should also prove of benefit to the County. The new orbital roads should be of considerable help in improving east to west communications, since at present, with the exception of the North Circular Road, the main lines of communication are chiefly radial in character. In addition, the establishment of express arterial roads for high speed and long distance traffic would relieve important radial roads in Middlesex, including such important thoroughfares as the Great West and Cambridge roads, the Western Avenue, and the Barnet and Watford By-passes, thus facilitating the movement of local transport.

Births and Birth-Rates.—Birth statistics for the last five years for Middlesex, London, the Great Towns, and England and Wales are given in the following table :—

Year.	The County		London	Great Towns	England and Wales
	Live births	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living
1941	*26,927	14·4	8·9	14·7	14·2
1942	†33,150	17·2	14·0	17·3	15·8
1943	†35,339	18·2	15·8	18·6	16·5
1944	†36,380	19·1	15·0	20·3	‡17·6
1945	†33,398	17·1	15·7	19·1	‡16·1

* These figures are not applicable to the calculation of infant and maternal mortality rates, in respect of which a secondary assignment of births has been made by the Registrar-General.

† Applicable to the calculation of infant and maternal mortality rates as the secondary assignment of births for this purpose has been discontinued. ‡ Rates per 1,000 total population.

As was the case for England and Wales as a whole, the birth-rate for the County showed an appreciable fall. This fall commenced in the spring of the year, and thus may be related broadly to the rapid transfer of large numbers of the armed forces overseas on and shortly after " D " day, 6th June, 1944.

While the total number of births was less during 1945, the number of illegitimate births, which have increased year by year throughout the war years, again rose, to a figure, 2,356, just over double that for 1940. The following table shows the numbers of legitimate and illegitimate births, for each year since 1939.

	Legitimate Births.	Illegitimate births.
1939	30,612	1,259
1940	28,356	1,161
1941	25,888	1,339
1942	31,547	1,603
1943	33,557	1,782
1944	34,375	2,005
1945	31,042	2,356

The Registrar-General, in his summary for England and Wales for 1945, while recording that the illegitimacy rate amongst live births was 34 per 1,000 above the average for the preceding five years, states that this must not be regarded as necessarily implying a corresponding increase in extra-marital conceptions, as past experience shows that pre-maritally conceived legitimate births have declined during the war.

Information regarding the births and birth-rates in each district in the County are set out in descending order of magnitude of birth-rate in the following table :—

BIRTHS AND BIRTH-RATES IN EACH DISTRICT, 1945.

Boroughs and Urban Districts.	Net Number.	Rate per 1,000 living.	Boroughs and Urban Districts.	Net Number.	Rate per 1,000 living.
Feltham	688	19·3 (21·0)	Ruislip-Northwood ...	980	17·2 (21·0)
Willesden (*Borough*) ...	2,807	19·0 (21·0)	Edmonton (*Borough*) ...	1,588	17·0 (21·0)
Hayes and Harlington ...	1,152	19·0 (20·8)	Twickenham (*Borough*)	1,541	16·8 (18·5)
Yiewsley and West Drayton	304	18·3 (22·1)	Wembley (*Borough*) ...	1,932	16·4 (18·6)
Acton (*Borough*) ...	1,040	18·2 (18·8)	Hendon (*Borough*) ...	2,239	16·3 (17·0)
Staines	609	18·2 (19·2)	Southall (*Borough*) ...	810	16·2 (18·7)
Enfield	1,718	18·1 (21·0)	Finchley (*Borough*) ...	987	16·1 (17·4)
Sunbury	355	18·0 (21·4)	Harrow	3,068	16·0 (18·8)
Tottenham (*Borough*) ...	1,988	18·0 (19·1)	Heston and Isleworth (*Borough*)	1,478	15·5 (16·5)
Uxbridge	812	18·0 (19·8)	Potters Bar	220	15·4 (20·6)
Hornsey (*Borough*) ...	1,392	17·7 (19·1)	Wood Green (*Borough*)	694	15·4 (18·7)
Brentford and Chiswick (*Borough*)	886	17·5 (19·9)	Southgate (*Borough*) ...	976	15·0 (17·1)
Ealing (*Borough*)	2,768	17·2 (19·4)	Friern Barnet	366	14·2 (15·1)

The corresponding birth-rates for the year 1944 are shown in brackets.

DEATHS AND DEATH-RATES (ALL CAUSES).—The comparative figures for Middlesex, London, the Great Towns and England and Wales as a whole are set out in the following table :—

Year	The County		London	Great Towns	England and Wales
	Deaths	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living
1941	20,804	11·1	16·3	14·9	12·9
1942	20,294	10·5	13·9	13·3	11·6
1943	21,397	11·0	15·0	14·2	12·1
1944	21,104	11·1	15·7	13·7	11·6
1945	20,523	10·5	13·8	13·5	11·4

For the reasons mentioned in the report for 1941–42 the issue of a " comparability factor " for each county and county district has been suspended. Figures of the " corrected " death-rate are therefore not available.

The table which follows gives information as to the number of deaths and the death-rate in each district in Middlesex.

DEATHS AND DEATH-RATES IN EACH DISTRICT, 1945.

Boroughs and Urban Districts.	Under 1 year of age.		At all ages.	
	No.	Rate per 1,000 births.	No.	Recorded Rate per 1,000 living.
Acton (*Borough*)	44	42·3	668	11·7
Brentford and Chiswick (*Borough*)	32	36·1	613	12·1
Ealing (*Borough*)	110	39·7	1,620	10·1
Edmonton (*Borough*)	58	36·5	965	10·3
Enfield	57	33·1	961	10·1
Feltham	38	55·2	319	8·9
Finchley (*Borough*)	36	36·5	725	11·8
Friern Barnet	14	38·3	237	9·2
Harrow	100	32·6	1,732	9·0
Hayes and Harlington	44	38·2	432	7·1
Hendon (*Borough*)	66	29·5	1,379	10·0
Heston and Isleworth (*Borough*)	75	50·7	925	9·7
Hornsey (*Borough*)	53	38·1	1,042	13·2
Potters Bar	8	36·4	148	10·4
Ruislip-Northwood	31	31·6	455	8·0
Southall (*Borough*)	25	30·9	462	9·3
Southgate (*Borough*)	40	41·0	781	12·0
Staines	39	64·0	366	10·9
Sunbury	16	45·1	189	9·6
Tottenham (*Borough*)	78	39·2	1,371	12·4
Twickenham (*Borough*)	74	48·0	1,117	12·1
Uxbridge	40	49·3	472	10·5
Wembley (*Borough*)...	66	34·2	1,024	8·7
Willesden (*Borough*)	129	46·0	1,767	11·9
Wood Green (*Borough*)	19	27·4	616	13·7
Yiewsley and West Drayton	4	13·2	137	8·3
The County	1,296	38·8	20,523	10·5

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF MIDDLESEX, 1945.

Causes of Death.	All Ages	0—	1—	5—	15—	45—	65—
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Typhoid and paratyphoid fevers	—	—	—	—	—	—	—
2. Cerebro-spinal fever	26	7	6	—	7	5	1
3. Scarlet fever	3	—	2	1	—	—	—
4. Whooping cough	14	12	2	—	—	—	—
5. Diphtheria	19	—	7	10	2	—	—
6. Tuberculosis of respiratory system	900	1	9	11	493	296	90
7. Other forms of tuberculosis	135	2	24	13	66	17	13
8. Syphilitic diseases	159	5	1	—	7	78	68
9. Influenza	98	10	9	1	7	27	44
10. Measles	28	9	16	3	—	—	—
11. Acute polio-myelitis and polio-encephalitis	5	—	1	1	2	1	—
12. Acute infective encephalitis	15	—	—	—	6	6	3
13. Cancer of buccal cavity and œsophagus (M), uterus (F)	321	—	—	—	24	144	153
14. Cancer of stomach and duodenum	551	—	—	—	30	215	306
15. Cancer of breast	413	—	—	—	54	202	157
16. Cancer of all other sites ...	2,305	—	3	7	180	934	1,181
17. Diabetes	152	—	2	1	11	34	104
18. Intra-cranial vascular lesions	2,006	1	—	1	25	470	1,509
19. Heart disease	5,037	1	—	5	188	1,081	3,762
20. Other diseases of circulatory system	853	—	1	—	35	172	645
21. Bronchitis	1,192	24	2	2	35	291	838
22. Pneumonia	1,092	214	24	9	49	217	579
23. Other respiratory diseases ...	279	8	3	4	36	88	140
24. Ulcer of stomach or duodenum	280	—	—	—	43	124	113
25. Diarrhœa (under two years)	134	130	4	—	—	—	—
26. Appendicitis	82	1	4	15	19	20	23
27. Other digestive diseases ...	425	13	10	3	64	112	223
28. Nephritis	453	1	1	6	57	143	245
29. Puerperal and post-abortive sepsis	9	—	—	—	9	—	—
30. Other maternal causes ...	24	—	—	—	24	—	—
31. Premature birth	348	348	—	—	—	—	—
32. Congenital malformations, birth injury, and infantile diseases	454	401	9	10	18	11	5
33. Suicide	173	—	—	—	53	78	42
34. Road traffic accidents ...	184	1	6	31	37	50	59
35. Other violent causes ...	675	29	27	55	139	148	277
36. All other causes	1,679	78	32	47	201	343	978
All causes	20,523	1,296	205	236	1,921	5,307	11,558

It will be seen that during 1945, there was a marked fall both in the total number of deaths and in the death-rate as compared with 1944. In the main, this may be attributed to the very much diminished toll of life taken by enemy action, which though still prevalent in the shape of long-range rockets and a very occasional fly bomb during the first three months of the year, was nevertheless on a greatly reduced scale. Deaths from this cause are included under heading 35 in the table and fell from 1,444 in the previous year to 675 in 1945. Among other causes of death, there are few variations sufficiently marked to call for comment. There was a rise in the deaths due to syphilitic disease, following the marked drop in 1944, but it is still below the figure, 191, for 1943. The total deaths from cancer remain practically the same, 3,590 against 3,585 in 1944, but there have been some changes in regard to the particular organs affected. Thus deaths from cancer of the buccal cavity

(M.) and uterus (F.) have fallen from 376 to 321, but cancer of the breast has risen from 386 to 413 and that of other sites from 2,266 to 2,305. Among other diseases the only ones to show differences of note are whooping cough, deaths from which have fallen from 50 to 14, while deaths from intracranial vascular lesions have risen from 1,947 to 2,006 and those from heart disease from 4,848 to 5,037, this latter constituting the greatest single cause of death. A rise of 139 in the deaths from bronchitis is partly offset by a fall of 68 in those due to pneumonia and 12 in those from other respiratory diseases.

Infantile Mortality.—During 1945, there was a slight check in the progressive decline in the infantile mortality rate which had continued without a break since 1941. The rate of 38·8 per 1,000 live births, is however, only slightly higher than that for 1944, and is still well below that for any previous year. The neonatal death rate is doubtless influenced to some extent by the still-birth rate. The still-birth rate recorded for Middlesex during 1945 was 23·3 per 1,000 total births and constituted a low record for the County, being 1·7 per 1,000 below the figure for 1944. While a proportion of still births are admittedly attributable to maternal causes, there still remain a number due to developmental defects, and other foetal causes. Thus a low rate for still births may well be accompanied, as a corollary, by an increased ratio in the live births of infants of sub-normal vitality who are unlikely for this reason alone to survive their first year of extra-uterine existence.

The infantile mortality rate during the year for that part of the County for which the County Council is the maternity and child welfare authority was 42·7 per 1,000 live births.

The following table gives comparative information as to infantile deaths and death-rates in Middlesex, London, the Great Towns, and England and Wales.

Year.	The County.			London.	Great Towns.	England and Wales.
	Births.	Deaths under 1 year.	Rate per 1,000 live births.	Rate per 1,000 live births.	Rate per 1,000 live births.	Rate per 1,000 live births.
1941	*25,512	1,327	52	68	71	59
1942	33,150	1,558	47	60	59	49
1943	35,339	1,536	43	58	58	49
1944	36,380	1,327	36·5	61	52	46
1945	33,398	1,296	38·8	53	54	46

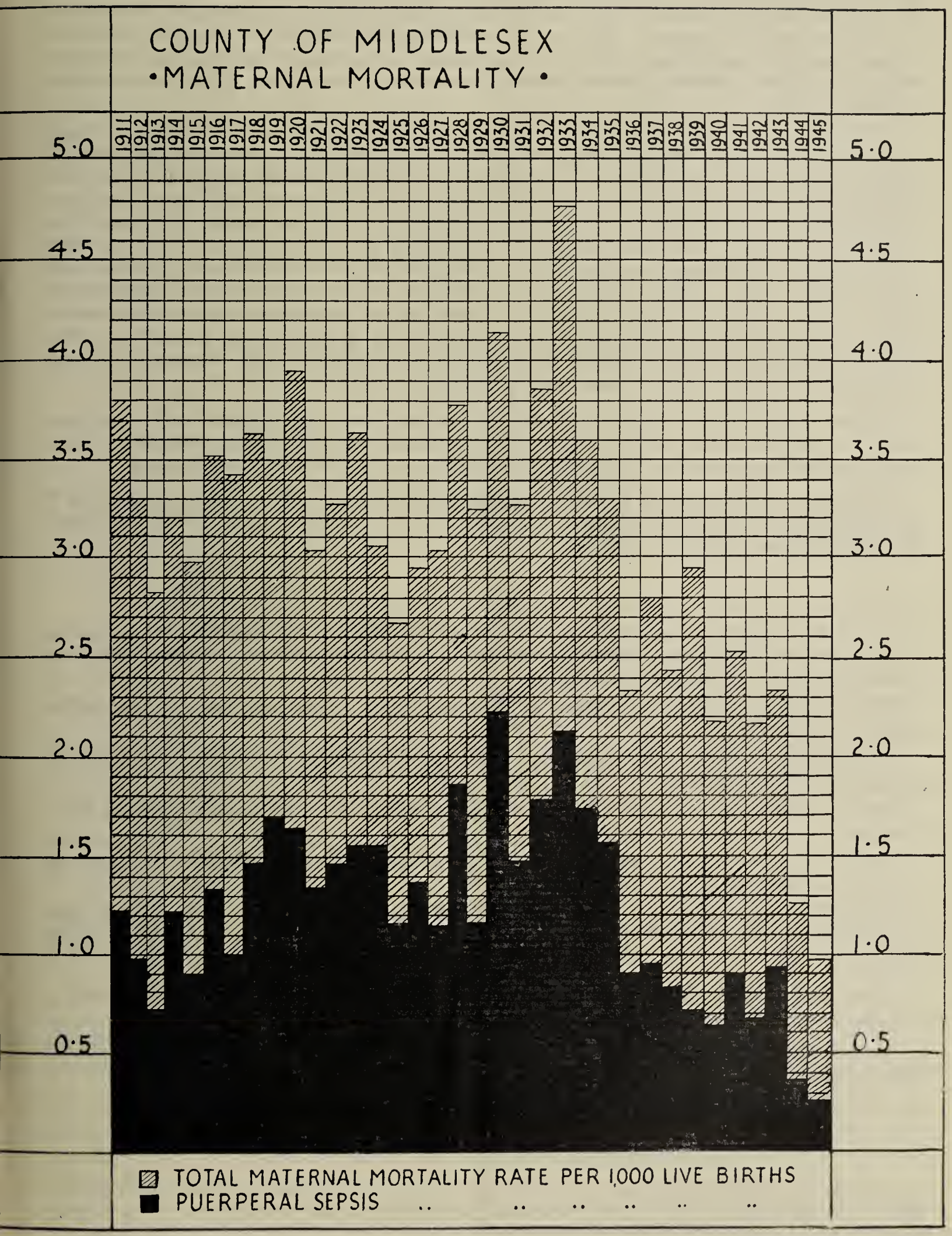
* These are adjusted figures provided by the Registrar-General for the calculation of infantile and maternal mortality rates.

Maternal Mortality.—The year was an outstanding one in respect of maternal mortality inasmuch as for the first time in the history of the County the rate fell below unity, amounting in all to only 0·99 per 1,000 live births. Both for puerperal sepsis, and for other accidents or diseases of pregnancy and parturition, the figures constituted new low records. When it is realised that as recently as 1939, the maternal mortality rate was only just under 3.0 per 1,000, and in no year prior to 1944 had it fallen below 2·0 per 1,000, it will be conceded that the progress made has been striking and bears eloquent testimony to the value of the policy that has made all measures calculated to maintain and improve the health of mothers and young children a prior claim upon the attenuated resources with which a major war has confronted the community as a whole.

In all, 33 deaths of women in Middlesex during 1945, were due to causes connected with pregnancy and childbirth. These deaths are classified in the following table under the two categories into which they are separated statistically by the Registrar-General :—

Year.	Puerperal sepsis.		Other accidents and diseases of pregnancy and parturition.		Total.	
	Number of deaths.	Rate per 1,000 live births.	Number of deaths.	Rate per 1,000 live births.	Maternal deaths.	Maternal mortality rate.
1941	23	0·90	41	1·61	64	2·51
1942	23	0·69	49	1·48	72	2·17
1943	33	0·93	49	1·39	82	2·32
1944	13	0·36	33	0·90	46	1·26
1945	9	0·27	24	0·72	33	0·99

The diagram on page 7 illustrates in graphic form the variations in maternal mortality since the year 1911.


COUNTY OF MIDDLESEX
•MATERNAL MORTALITY•
1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945
5·0
4·5
4·0
3·5
3·0
2·5
2·0
1·5
1·0
0·5
TOTAL MATERNAL MORTALITY RATE PER 1,000 LIVE BIRTHS
PUERPERAL SEPSIS .. ..

GENERAL HOSPITALS.

The year 1945 was a memorable one. The victorious conclusion of the war against Germany came in May followed shortly and somewhat unexpectedly by the capitulation of Japan in August. The immediate effect upon the Council's hospitals of the end of the German war was the cessation of all A.R.P. activities and the end of black-out with its depressing effect upon patients and the difficulties of ventilation which it imposed. This was an immediate psychological and physical relief to be followed later, as labour became available, by the gradual demolition of blast walls, the opening of bricked-up windows and the removal of other ugly reminders of the six years of total war which had just come to a close.

With the end of the war, there began the eagerly awaited period of transition from war to peace, the reconstruction of what had been destroyed and the resumption of the development of the hospital services which the war had brought to a standstill. It was then that the magnitude of the task became apparent and the difficulties which the fighting years had obscured loomed large and were magnified by the war weariness of a people whose urge to "go to it" not unnaturally waned after victory had been won. Some improvements, however, began to occur in the later months of 1945. With the start of demobilisation the hospitals were very glad to welcome back some of the men and women, members of the hospital staffs, who for some years had been away, serving in His Majesty's Forces. With the release of large numbers of doctors from the fighting services available medical staff for appointment to the hospitals improved greatly both in quality and in numbers. This matter is touched upon in more detail in the section below dealing with staff. Shortages of nursing and of domestic staff, however, became matters of serious concern.

Staines County Hospital which technically had continued to be administered under Poor Law powers was appropriated to public health purposes. In order to avoid confusion with other neighbouring hospitals its name was changed by the County Council to *Ashford County Hospital.*

Hillingdon Institution ceased to have an independent existence on 23rd October, 1945, when it was appropriated for public health purposes and incorporated in Hillingdon County Hospital, of which the buildings formed a part.

Staff.

Dr. J. B. Cook, for 32 years Medical Director of West Middlesex County Hospital, retired in December and was appointed Consulting Physician to the Hospital. He was succeeded as Medical Director by Mr. R. L. Galloway, F.R.C.S.

Dr. W. Broughton Alcock, Pathologist to the same hospital, retired and was appointed to the honorary consulting staff.

Miss E. Huggins, Matron of West Middlesex County Hospital since 1916, retired and was succeeded by Miss A. M. D. Leslie, D.N.

Miss O. Hill, Matron of Ashford County Hospital, resigned and was succeeded by Miss E. P. McWilliam.

Miss L. W. Orchard was appointed to the matronship of Edgbury Convalescent Home in succession to Miss M. A. Bishop, R.R.C.

Mr. E. W. E. Poole, Steward of Central Middlesex County Hospital since 1932, died on 28th December, 1944. Mr. H. C. Draper, his deputy, was appointed to the stewardship in an acting capacity.

The following appointments (acting) were made to the senior staff of the Council's hospitals :—

West Middlesex County Hospital.—Senior Physician, J. A. Torrens, M.D., F.R.C.P.

Central Middlesex County Hospital.—Anæsthetists, A. C. R. Rankin, M.B., B.Ch., D.A., Miss S. Ransom, M.R.C.S., L.R.C.P., D.A.

Ashford County Hospital.—Surgeon, S. Stanford, M.B., Ch.B., F.R.C.S.

The Future Medical Staffing of County Hospitals.

In July the County Council gave consideration to a report on this matter by the County Medical Officer. As the subject is one of great importance to the growth and development of the County hospitals in the future, the report is reproduced in full.

After prolonged discussion in committee and at the County Council meetings in July and October the report was adopted in its entirety with the following amendments :—

(1) That members of the medical staff should be expected to undertake teaching as part of their ordinary hospital duties and that extra fees would not be payable to the staff for teaching arranged by the County Council in their own or other hospitals.

(2) That the special increments referred to in the report for men of outstanding ability may be given only by resolution of the County Council "on proof of outstanding achievement."

REPORT OF THE COUNTY MEDICAL OFFICER UPON THE STAFFING OF COUNTY HOSPITALS.

1. A stage has now been reached in the process of developing the Council's general hospitals when consideration needs to be given to the question of the future method of medical staffing. It is fifteen years since, in 1930, the County Council took over the administration of the establishments now known as County general hospitals, and in that comparatively short time (of which $5\frac{1}{2}$ years have been occupied by the greatest war in history) the institutions, by the energy of the County Council, have been transformed from workhouse infirmaries into general hospitals widely recognised as providing a high standard of medical service.

2. When the County Council took over the hospitals in 1930, their usual method of medical staffing had been by a medical superintendent (generally the senior clinician as well as the senior administrator on the staff) assisted by a number of comparatively junior men who, for the most part, were seeking experience and who necessarily worked with little or no supervision. There was but little attempt at specialisation, the work of medicine, surgery, obstetrics and anæsthetics being shared by the staff without any great regard to the capacity or special experience of the individual members for tasks in which they were engaged. In its first grading scheme in 1931 the County Council made provision for one resident surgeon, one resident physician, and one resident obstetrician at each hospital at a salary of £600 × £50–£800 per annum (resident). Few of the posts however were filled and in 1934 Dr. Tate reported to the Public Health Committee that the response to advertisements had been unsatisfactory and that either the salaries offered or the conditions were apparently not such as to attract many medical men and women of ability to the Council's service. The Council thereupon, on his advice, instituted a grade of whole-time non-resident physicians, surgeons and obstetricians at a salary of £1,000 rising to £1,500 per annum. It was intended that not more than one of each of these senior officers should be appointed to each of the larger hospitals with the idea that each should supervise the entire work of his department—medicine, surgery and obstetrics. At the same time a further grade of senior non-resident clinicians was introduced, the "Grade II" physician, surgeon, and obstetrician at a salary of £650—£1,000 per annum, the intention being that these should be junior to the "Grade I" officers who should to some extent supervise their work, or that Grade II clinicians should be appointed to those hospitals where the turnover of work was as yet insufficient to necessitate the appointment of officers on Grade I salary. The rest of the staff of the hospital, apart from a small number of visiting specialists, was made up of a number of comparatively junior men—assistant medical officers (£400—£475, resident) and junior assistant medical officers (£250 resident).

3. The introduction eleven years ago of even a limited number of wholetime senior clinicians marked a great step forward in the evolution of the municipal hospital service and, as in other directions, Middlesex was a pioneer in this matter. The system outlined above has, with certain modifications, remained the basis of medical staffing of Middlesex County hospitals up to the present and under it the quality of medical service has improved enormously. Time has demonstrated, however, a number of imperfections in the present system and if, as is confidently anticipated, the County hospitals are to form centres of medical education and research, and if the standard of service given to the sick of Middlesex is to equal the best rendered by the best of the voluntary hospitals in this country, further reforms are necessary. It must be clear to members who have a close knowledge of the work of the County general hospitals that it is not possible for one senior clinician, however skilful and assiduous, effectively to supervise the clinical work of his department, comprising as it may some hundreds of beds and thousands of out-patients. In consequence, the bulk of the work must be done by relatively junior men or women *working without proper supervision*—an arrangement which is unsatisfactory for them and more unsatisfactory for the patients. The attempt to strengthen the position of the Grade I clinician by appointing a Grade II clinician to assist him is also unsatisfactory. In practice the Grade II officer does not assist the Grade I, but accepts equal responsibility with him in the charge of beds and care of out-patients. If the Grade II man is the equal in ability and experience of his Grade I colleague, as is sometimes the case, the only difference between them is a substantial one of salary ; if he is less able it means that certain patients are receiving a lower standard of skill than they ought to receive. It is of course impossible and unnecessary that the entire work of a hospital should be carried out by men of consultant status, but it is, I submit, not too much to expect that the care of every patient (acute or chronic) in hospital shall be supervised by a consultant of a high degree of skill. This is the arrangement which obtains, at any rate in theory, in the best Voluntary hospitals, and it is suggested that the County Council, with the added advantage of a wholetime senior staff, should be able to carry out both in theory and in practice what is there attempted.

4. It is recommended that the general clinical work of a hospital should be divided between units or teams. A team for general medicine or general surgery would consist of :—

Senior Clinician (Physician or Surgeon).
Chief Assistant.
Senior Houseman.
Junior Houseman (Pre-registration).

5. This team would be responsible for a definite number of beds, acute and chronic, with out-patients and teaching. The number of beds allotted to a team would depend upon the character of the work, turnover, proportion of chronic beds, amount of teaching (which is very time-consuming) &c., but would probably be something under 100.

6. A team for a speciality (*e.g.*, E.N.T. or obstetrics), would be similarly constituted, except that both housemen would be senior (*i.e.*, post-registration). An obstetric team would be responsible for some 30 lying-in beds, about the same number of gynæcological beds, a few ante-natal beds with out-patients and teaching.

It is not suggested that the constitution of a team should be absolutely rigid. Some elasticity to meet local and other circumstances is desirable. Thus, in order to meet educational requirements more than one junior houseman might be appointed to a team.

7. *Senior Clinicians* (physicians, surgeons, obstetricians and specialists).—These will need to be men and women of very high professional attainments and qualifications with wide knowledge and experience, who are capable not only of conducting a service of a very high standard for the sick, but also of undertaking teaching both undergraduate and postgraduate, and taking part in the training of consultants and specialists like themselves. In order to attract to and retain in the Council's service clinicians of the calibre I have in mind a substantially higher salary than that at present payable will be necessary. I suggest a scale of £1,200 × £100—£1,800 per annum, and for those who attain this maximum and give proof of outstanding ability above their colleagues further increments of £50 to £2,200. I attach very great importance to the inclusion by the County Council in its grading scheme of this provision for additional financial reward for really outstanding clinicians in its hospital service, and in my opinion the knowledge that very exceptional merit would be so recognised would produce a most stimulating effect upon the service. The numbers attaining to these highest salaries would almost certainly be limited, and length of service in itself should be no criterion in recommending a clinician to proceed above the salary of £1,800.

8. *Chief Assistants.*—These would be men and women already in possession of one of the higher qualifications, *e.g.*, M.R.C.P., or F.R.C.S. who aimed at becoming consultants or specialists and who were desirous of spending a few years of apprenticeship, serving under one of the Council's senior clinicians. A salary of £750 × £50—£950 (non-resident) is suggested, the appointment normally being one of from 1–3 years, and not, save in very exceptional circumstances, exceeding 5 years.

9. For a long time to come there will be a great dearth of consultants and specialists of the first rank. The Middlesex County hospital service has the resources to help in making good this national shortage and to train men and women as consultants and specialists, qualified to hold senior positions in the Council's service or elsewhere at home or abroad. Chief assistants are the consultants and specialists of the near future, and it is important therefore that the grade should not be a static one. A degree of turnover within the grade should be actively encouraged to avoid the position of a man holding the post of chief assistant too long and thus blocking the chances of those who come after him.

10. Chief assistants would probably be men or women in the early 30's and therefore very possibly married and with a family. These appointments, therefore, should be non-resident, but the chief assistant should live at the hospital during the time his unit is on duty, residential emoluments being provided for him at the hospital during this time without additional charge.

11. The chief assistant would assist and learn from the senior clinician. He should be sufficiently senior to be able to deputise for his chief (with the support and assistance of the other senior clinicians) during the latter's absence on account of sickness or leave, and would thus obviate the need for the employment of locums in the senior grade.

12. I also visualise the services of chief assistants in certain special departments of the County hospitals (*e.g.*, children, eye and ear, nose and throat departments) being used in connection with the school medical service and, backed by the resources of their County hospital, attending specialist school clinics in the districts of Middlesex.

13. *Housemen.*—The introduction of the grade of junior housemen presupposes that the recommendation of the Goodenough Committee will be carried into effect, namely that legislation will be introduced making it a prerequisite of medical registration that after passing his final examination a young practitioner will be required to hold a house appointment for twelve months. It is thought that part of this year, probably six months, may be spent in a County hospital. A salary at the rate of £150 per annum, resident, is suggested for this post.

14. The senior housemen, that is practitioners after registration holding a house appointment in the general departments of a hospital or in special departments, *e.g.*, obstetrics, pædiatrics, orthopædics, anæsthetics, &c., should have a salary of £250 per annum plus residential emoluments.

Department of Pathology.

15. This is a department which needs to be considerably developed in the Council's hospitals, as it provides the keystone of the scientific investigation of disease and frequently indicates the proper line of approach both in diagnosis and treatment. The standard of excellence of a hospital depends in no small measure upon the efficiency of its pathological department, a fact which has been well recognised in the teaching hospitals. If progress is to be made in the Council's hospitals along the lines of scientific investigation of disease processes, of research and of teaching; and if, as is recommended in the Gray-Topping Survey Report, the hospital laboratories are to provide a service of clinical pathology for general practitioners (a much needed advance) very substantial expansion will need to take place in the departments of pathology in respect of premises, equipment and above all, staff. According to the needs of a hospital there should be one, two or three men in charge respectively of the depart-

ments of bacteriology, morbid anatomy and chemical pathology. Their salary scales should be but slightly lower than those of senior clinicians, namely £1,100 × £100 to £1,700 per annum, and on proof of outstanding ability further increments of £50 to £2,000.

16. *Assistant Pathologists.*—This grade, comparable to that of chief assistant in the clinical departments, should consist of men or women who have already worked for three years or more in whole-time pathology. The appointments normally in this grade would be from two to five years. A salary of £750 to £950 is suggested.

17. *Junior Assistants* (resident pathologists), *i.e.*, men or women who after holding clinical house appointments and having already some experience in pathology wish to take up this subject as a career. Salary of £400 × £50—£500, resident. Appointment normally not to exceed three years.

18. *House Pathologists* (analogous to senior house officers).—£250 per annum resident.

Department of Radiology.

19. There should be at least one whole-time radiologist for each general hospital at the same salary scale as for pathologists. There should also be a grade of radiological registrar, that is to say a man already in possession of a diploma in radiology who wishes to become a specialist in the subject. This man should be resident and his services would be invaluable for the interpretation of radiograms outside the normal working hours of the X-ray department. Salary—£500 × £50—£600, resident.

Department of Anæsthetics.

20. Senior anæsthetists should be in possession of a diploma in anæsthetics and have had wide experience in their specialty. Although skilled anæsthetists are of the greatest value to a hospital it cannot be contended that the training necessary in this limited specialty is comparable to that required by a general physician or general surgeon of comparable status. Accordingly a somewhat lower salary scale is proposed, namely, one of £1,000 × £50—£1,400 per annum, and for those who prove themselves to be possessed of outstanding ability further increments of £50 to £1,600.

21. Chief Assistants in this department would be those who had acquired a diploma, but whose experience was less than that of the men in the senior grade, and a salary is suggested for them of £650 × £50—£850 per annum. In addition a resident anæsthetist might well be necessary at a salary of £400, resident, and house anæsthetists at the grade salary for senior housemen, namely £250 resident.

Casualty Department.

22. This is a very important department of a hospital and needs to be staffed by doctors of experience. Each hospital should have one or more casualty registrars, that is to say men who have held a number of resident appointments and preferably are in possession of a higher qualification in medicine or surgery. They would be non-resident and would be assisted by junior casualty officers on the same grade as senior housemen, who would be resident. During the night, casualty and admission cases would be supervised by the chief assistants on duty. The post of casualty registrar would not normally be held for more than one or perhaps two years, and that of junior casualty officer for one year. Suggested salary for the former, £600 × £50—£700, non-resident.

Medical Director.

23. In 1943 the County Council adopted the following principles in connection with the staffing of County hospitals :—

(1) The head of the hospital should be a doctor of high clinical attainments who should remain in active clinical practice of his profession and who might be given the title of " Medical Director."

(2) His medical administrative functions should be largely those of co-ordinator of the medical services and various hospital departments.

(3) The remuneration of medical superintendents of the five major general hospitals should be the same and should not depend, as at present, upon the authorised number of beds.

(4) The conditions and salaries of senior clinicians should be such as to provide a satisfying career without a man having to transfer to an administrative post to obtain promotion.

Principles (3) and (4) though adopted were not implemented as it was not at that time considered desirable to introduce new salary scales.

24. If a medical director, in addition to medical administration, is to continue to carry on clinical work and retain the respect of his colleagues for his clinical ability (which to my mind is most desirable) he will almost of necessity have to carry a heavier burden of work and responsibility than any other member of the staff. This fact needs to be recognised without violating principle (4) above. It is accordingly suggested that the scale of salary for the medical directors of the Council's existing five major hospitals (North Middlesex, West Middlesex, Central Middlesex, Redhill and Hillingdon County Hospitals) should be £1,400 × £100—£1,900 and thereafter by £50 to £2,300 per annum with no emoluments. As to the Council's temporary hospitals at Staines and Chase Farm, and future hospitals, it is suggested the salary should be fixed *ad hoc* having regard to the responsibilities of the medical directors concerned and in the light of the above scale.

Deputy Medical Director.

25. The office of deputy medical director might with advantage be held in turn by senior members of the medical staff who might each hold the position for say two years—it could be made clear at the time of appointment that this would be expected of them without additional remuneration or at most an honorarium of £50 per annum.

26. The system of medical staffing outlined above should provide for most eventualities in a general hospital. It will be noted that there is a wide gap between the position of senior house officer and that of chief assistant. This, in my opinion, is not a disadvantage as I do not visualise a man progressing from the bottom to the top of the Council's medical service in an unbroken career. A man who wishes to attain consultant status would do better, after holding a series of junior medical appointments, to leave the Council's service, undertake advanced studies of one or more of the basic medical sciences of anatomy, physiology and pathology and gain experience in other types of hospital at home or abroad, or in other fields of medical practice. After a few years thus spent he should be eligible for a post as chief assistant.

27. It is not possible, however, to foresee all the lines of development which the Council's general hospital service may take ; and, in preparing a scheme of staffing which it is hoped may last for some years, it is well to make it as comprehensive and as elastic as possible. In the summary at the end of the report, therefore, provision has been made for the intermediate grades of registrar and of resident medical officer, &c. It may be that these grades will not be required, or not required to any great extent at any particular hospital, but their inclusion will enable staffing to be dependent on local requirements at any phase of a hospital's development.

28. It is suggested in this report that all medical appointments, except those of medical directors and senior clinicians and pathologists should be of limited duration. They might be made in the first instance for one or two years and thereafter extended year by year if desired. I gave careful consideration to the question of whether, in order to minimise the effect of unsatisfactory appointments, " misfits," &c., senior staff also should be appointed in the first place for a limited period of office, but decided that such a course would discourage many candidates from applying for a post offering such doubtful security of tenure.

29. In these circumstances it is of the highest importance that very great care should be exercised in the selection of men and women to fill the most senior clinical positions in the Council's service, for it is in their hands that the reputation of the Council's hospitals will chiefly lie. The last word in the making of an appointment rests of course with the Public Health Committee and the County Council, but I submit that in the case of permanent senior appointments the most scrupulous care should be taken in assessing a candidate's capabilities and reputation for professional skill before his name is brought to the appointing committee as that of a candidate fitted for the post in question. This needs time and expert assessment, and in this connection the Committee are reminded of the arrangement already approved by the County Council whereby senior clinicians in the Council's service participate in the preliminary selection of new senior colleagues. This is in accordance with a recommendation in the Gray-Topping Report (page 16) that appointing bodies in making their choice should be assisted by an expert medical advisory committee. If the County Council's hospitals are to undertake teaching under the ægis of the University of London and in partnership with one or more existing teaching hospitals (*e.g.*, Charing Cross) it will doubtless be a requirement that both the parent teaching hospital and the University shall participate in the appointment of candidates for senior teaching posts : and the expert knowledge which their representatives could bring should be of material help to the Council.

The County Sanatoria.

30. Whilst the foregoing scheme of staffing is applicable in its main principles to the sanatoria, certain modifications in detail are necessary to adapt the scheme to the needs of a tuberculosis hospital as distinct from those of a general hospital. The team system should be very satisfactory in a sanatorium—on the medical side a team consisting of a physician, chief assistant and two residents should be able to look after, perhaps, 250 beds. The physician should be of equal status (and salary) with his colleagues in the general hospitals. The conditions for the chief assistants and of the residents, however, should be somewhat different. The need for turnover in all but the senior appointment, to which reference was made in paragraph 9, is less important in a sanatorium than in a general hospital and, owing to the protracted course of the illness and length of stay of the patients, is less desirable. Moreover, it must be remembered that a number of men in the tuberculosis

service have themselves suffered from the disease; and for many of these, though they are doing admirable work, their ambition may not be to rise to the top of their profession, but rather to undertake sound and steady work under sanatorium conditions and to live within their capacity. In the case of chief assistants then, although it might be well to make the appointment for a limited period in the first place, I see no great objection to this period being extended almost indefinitely, subject to review from time to time. With regard to the two junior resident appointments on each unit on the medical side of the sanatorium, these could be senior house officers (£250) or resident medical officers (£400) or a suitable man after a year in the lower position might be promoted to the higher. A resident medical officer in a sanatorium might have his term of office extended from one to two, three or even more years.

31. For the thoracic surgical unit in a sanatorium the system and conditions applicable to a surgical unit in a general hospital should apply without modification.

32. The pathological work of a County sanatorium justifies the appointment of one or more whole-time pathologists. The relatively restricted scope of the work is such that at present an appointment on the lower grade (£750—£950) at each sanatorium is all that is required. One or more appointments later on the senior grade, or perhaps a senior to serve both sanatoria and co-ordinate investigation and research is a possibility to be borne in mind.

33. The medical director of a sanatorium though fulfilling a most important function, has not the range or the complexity of medical administrative problems to deal with, as fall to the lot of his colleague in a general hospital. It is suggested therefore that his salary should be that of a senior clinician with a normal maximum of £1,800 per annum.

34. In this report I have confined my recommendations to whole-time medical appointments, for in spite of the criticisms in the Gray-Topping Report (pages 7, 16 and 40), I am not convinced that in the Middlesex service the employment of part-time specialists serving two or three hospitals and also engaged in private consulting practice has any advantages over the whole-time system developed in this county—and has, indeed, certain disadvantages. The valid criticisms urged against the whole-time system—understaffing and underpayment of specialists—can and should be met in other ways than by embarking on a part-time specialist system for carrying on the work of the Council's hospitals. Whilst adhering to the general principle of the whole-time system, however, I am of opinion that there are certain directions in which a specialist might, with advantage, undertake work outside his own hospital. For example, physicians at the County chest hospitals might serve as out-patients physicians in the County general hospitals; surgeons of the general hospitals might be engaged to look after patients suffering from non-pulmonary tuberculosis in the chest hospitals. Certain specialised services in the Council's hospitals such as radiotherapy, plastic surgery, and dermatology might be conducted by visiting specialists with charge of beds. In these and other ways it should be possible to avoid any suggestion of isolationism among the staff of the Council's hospital service. Moreover, if the governing bodies so desired, certain of the whole-time salaried consultants in the Council's service might be appointed as visiting consultants with charge of beds at some of the larger voluntary hospitals in the neighbourhood of the County Hospitals.

Should however the County Council wish at any time in the future to employ part-time consultants and specialists in substitution for, or in addition to, the whole-time system, this could quite well be done, the part-time consultant being paid a *pro rata* salary and conducting a unit of reduced size with the help of a chief assistant and house officers.

35. If the scheme outlined in this report is adopted with or without modification by the County Council it could not be uniformly applied forthwith because of the shortage of available consultants and specialists which is likely to be experienced until the end of hostilities in Asia and after. It might, however, be gradually brought into operation and applied so far as practicable to new appointments. Existing officers would need to be reviewed individually in relation to the new scheme. Some could be fitted in without difficulty; others for one or other reason might have to remain in their existing grade for so long as they stayed in the Council's service. There would thus need to be a transition period, possibly fairly lengthy, during which the Council's existing arrangements and the new system operated side by side.

36. Should fixed national scales of salary materialise for whole-time consultants and other doctors in hospitals (which seems a little doubtful), the County Council would need to review its decisions in the light of government policy. I cannot, however, advise the County Council to postpone action in the expectation of the appearance of national scales. If the Middlesex County medical service is to maintain the position it has won, the reform of its system of medical staffing is an urgent matter.

Salary Scale.

Medical Directors (North Middlesex, Central Middlesex, Redhill, West Middlesex and Hillingdon County Hospitals).	£1,400 × £100—£1,900 × £50—£2,300 (no emoluments).
Senior Clinicians (Physicians, Surgeons, Obstetricians, Specialists).	£1,200 × £100—£1,800 thereafter on proof of outstanding ability × £50 —£2,200.
Medical Directors, Harefield and Clare Hall	Ditto.
Pathologists, Radiologists	£1,100 × £100—£1,700 thereafter on proof of outstanding ability × £50 —£2,000.
Senior Anæsthetists	£1,000 × £50—£1,400 thereafter on proof of outstanding ability × £50 £1,600.
Chief Assistants (General, Special) ... ... Assistant Pathologists (or Pathologists in a small laboratory)—Appointment normally from 1–3 years, and not for more than 5 years, save in very exceptional circumstances.	£750 × £50—£950 non-resident, but residential emoluments, without charge when team is on duty.
Chief Assistants (Department of Anæsthetics) ... ... Appointment normally from 1–3 years, and not for more than 5 years, save in very exceptional circumstances.	£650 × £50—£850.
Registrars (General, Special, Radiological, Casualty) ... (Appointment normally 1–2 years.)	£600 × £50—£700 (or if resident £100 less).
Resident Surgical Officers, Resident Medical Officers, Resident Anæsthetists. (One year appointment.)	£400, resident.
Resident Pathologists, Resident Medical Officers (Sanatorium). (1–3 pear appointment.)	£400 × £50—£500, resident.
Senior House Officers (House Physician, House Surgeon, House Anæsthetist, House Pathologist, &c., Junior Casualty Officer. (One year appointment.)	£250, resident.
Junior House Officer (Pre-registration)	£150, resident.

Hospital Accommodation.

Building operations were almost impossible in 1945, and there is therefore very little to report as to new construction completed during the year. A certain amount of planning took place, however, of urgent projects and these were approved in the hope of work being started when labour and material became available.

North Middlesex County Hospital.—Plans were approved for the erection in temporary construction of an ante-natal clinic to take the place of some of the out-patient accommodation destroyed by enemy action in April, 1944. The new building is planned to contain a waiting hall, three consulting rooms, four history-taking rooms and offices.

Chase Farm County Hospital.—To provide some much needed maternity accommodation in the north of the County, the Ministry of Health agreed to give up the use of a medical block used for E.M.S. neurological cases, and plans were prepared for the conversion of this block into a maternity unit of 46 beds.

Ashford County Hospital.—Plans were prepared and tenders accepted for the conversion of a hutted building, formerly used as a day nursery, into a clinic for the out-patient treatment of venereal diseases.

Hillingdon County Hospital.—An extension in temporary construction of the maternity unit consisting of a range of labour rooms and nurseries was opened in March. A new X-ray department providing X-ray rooms, dark room, dressing cubicles, waiting-room and offices was opened in July.

Central Middlesex County Hospital.—Plans were prepared for the alteration of the X-ray department to provide two further X-ray rooms, waiting rooms, dressing cubicles, a reception office and a filing room. Two new X-ray sets with rotating anode tubes to be installed in the new rooms, were put on order.

Damage to Hospitals by Enemy Action.

In the few months of 1945, before the war came to an end, two major incidents occurred at County hospitals, neither fortunately causing loss of life but each bringing about a further serious loss of beds to an already stricken hospital.

Central Middlesex County Hospital.—On 27th January, a flying bomb fell and caused such serious damage to J Block—a 100-bedded detached unit for chronic sick patients—that the building had to be demolished. All the patients fortunately had been among those evacuated during the previous summer, so that at the time the bomb fell, the building was standing empty. The same explosion caused widespread but superficial damage to the John Tate Maternity Unit, making the building temporarily uninhabitable. The patients were transferred to other parts of the hospital and new admissions were diverted to other County hospitals for a few days after which time repairs were completed and the unit came back into use.

North Middlesex County Hospital.—On 3rd March, a long-range rocket fell on a factory, 30 yards from the hospital. Serious damage was done to the maternity wards, the pathological department and to D Block, a unit of about 100 beds for chronic sick patients. These buildings had to be evacuated. The pathological department was repaired within a fairly short time, but the ward blocks were out of action for many months. In fact, it was not until after the end of the war that it was decided to attempt to repair D Block at all, as it had been so badly damaged that it was considered that a further explosion in the near neighbourhood might have brought the whole building down.

To deal with the loss of maternity beds, it was decided to carry out rapid adaptations to Mary Ward, a large hutted building which had been erected for the 1914–18 war, and which was standing empty, the patients having been evacuated to the provinces in the summer of 1944. The extemporised adaptations, carried through with great speed, were surprisingly successful, and the hospital was left with a far better maternity unit than it had possessed before the rocket fell, and one which, despite the old and temporary premises, should be capable of serving for a few years.

Return of Evacuated Hospital Patients.

An account was given in the Annual Report for 1944, of the large-scale evacuation by hospital train of patients from Middlesex County hospitals and institutions in advance of the long-range rocket attack upon London which, it was known, the Germans were preparing. The numbers of patients thus removed were as follows :—

Acute sick	730
Chronic sick...	1,000
Pulmonary tuberculosis	219

With the close of hostilities, these patients naturally desired to return to Middlesex, and the authorities of the areas to which they had gone were no less naturally anxious to speed their departure. The group of acutely sick patients caused no difficulty : most of them recovered from their illnesses and in due course were discharged to their homes. The chronic sick patients, however, presented on almost insoluble problem. During the latter years of the war, domestic difficulties had led to an ever-increasing demand on the Council's hospital accommodation for the chronic sick. Soon after the evacuation of patients in the summer of 1944 had taken place, such beds which they had vacated as could be staffed, were pressed into service again and filled ; the demand on the part of really pitiful cases being such as the Council simply could not refuse. In addition, as has been reported, several hundreds of beds for chronic sick patients had been destroyed by enemy action. In consequence of the foregoing, when requests came for the return of Middlesex patients, there was very little accommodation available for them. By various expedients, however, it was found possible for the following patients to be received :—

July, 1945, from Scotland	125	chronic patients.
August, 1945, from Scotland	135	,, ,,
October, 1945, from Keighley	89	,, ,,

In addition to the above, a total of 65 tuberculosis cases returned to the County during the latter months of the year. These return movements, however, strained the resources of the County to the utmost, owing to shortage of nursing and domestic staff.

Charing Cross Hospital.

During the previous two years, preliminary talks had taken place between members of the governing body of Charing Cross Hospital and members of the County Council, with a view to the rebuilding of Charing Cross Hospital within the County of Middlesex. The County Council had the opportunity of acquiring from the Harrow School Trustees, the whole of Northwick Park Golf Course, partly as an open space and partly for the erection of a technical college with its playing fields and other county and municipal purposes. This opportunity was taken and of the land thus acquired, the County Council agreed to convey to the governing body of Charing Cross Hospital, some 20 acres for the erection of the new hospital.

From the very friendly conversations which took place, there emerged an agreement in principle which is probably unique and which envisages a degree of co-operation between voluntary and public services never hitherto achieved. The salient points are very clearly set out in a memorandum which the Chairman of the Governors of Charing Cross Hospital, Mr. Philip Inman (now Lord Inman) sent to the County Council. An extract of this is as follows :—

" The new hospital should be built on a scale to accommodate not less than 1,000 patients. Buildings would also be required for a medical school with an estimated annual entry of 100 students and a total strength of about 400 clinical and pre-clinical students ; a hostel for students ; a nurses' home to accommodate 400 nurses ; a training school for probationers ; a pathological institute ; an administrative block. Additional premises would probably be required so that the present arrangement with the Royal Dental Hospital for the teaching of their students might be continued. It is also possible that some of the existing specialised hospitals in London might wish to amalgamate or become associated with the new Charing Cross Hospital centre. The site of 20 acres, now under consideration, would appear to be adequate to meet possible requirements.

It will be the aim of the Hospital and Medical School to provide as complete a medical curriculum as possible. It will, therefore, be essential to have the most modern types of in-patient and out-patient departments. In order to meet the growing need of providing for maternity cases as well as to supply the educational requirements of about 100 students annually, a large maternity unit consisting of 100 beds will be required. Associated with the maternity department will be the ante-natal clinic, the infant welfare clinic, &c. It will also be necessary to provide 100 beds for the care of the chronic sick—a type of patient which has hitherto not been admitted to the majority of teaching hospitals, notwithstanding the fact that doctors in general practice have to treat such patients. But whilst endeavouring to include as many departments as possible in the new hospital, it is recognised that such subjects as fevers, lunacy and public health services can best be studied under the guidance of their administrators—the local authority. Probably much of the teaching in social medicine would be better carried out through the same channel. This liaison between the Hospital and the County Council might be carried still further, namely, in co-operating to provide clinics for tuberculosis and venereal disease.

It will be recognised by the County Council that at a teaching hospital some selection of cases for admission is necessary in order that a suitable variety of teaching material may be available for the training of undergraduate students. Of its total beds, however, the Governing Body of Charing Cross Hospital would be willing to set aside (*) for local needs, and, if it were the wish of the County Council, would use these for providing a complete hospital service for the inhabitants of a definite area of the County to be delimited by agreement between representatives of the Hospital and of the County Council. That is to say the Hospital would undertake to admit from the said area, without selection, all cases applying for admission and considered to be in need of in-patient treatment. Exception would need to be made of patients suffering from conditions ordinarily treated in infectious diseases hospitals and mental observation cases needing admission under Section 20 of the Lunacy Act. The boundaries of the area for which the Hospital thus accepted responsibility would need to be reviewed from time to time in the light of building development and other factors.

There seems no valid reason why a very close relationship should not be established between the new Charing Cross Hospital and the Middlesex County Council. It should be possible for reciprocal arrangements to be made for consultations, teaching facilities, demonstrations and lectures, &c., which would bring far-reaching benefit to all concerned.

In this connection the medical school would welcome an arrangement whereby undergraduate students were seconded to a County hospital for a period of say three or six months in the course of their three years' clinical training. During the period they would have opportunity of being instructed by the Council's medical staff upon types of cases not frequently encountered in the wards of voluntary hospitals, and would also learn something of the social and health services developed in the County.

The scheme now under consideration bears the germ of an experiment in co-operation which may go far to remove the barrier, set up largely by insufficient knowledge and wrong thinking, between the ' voluntary ' and the ' municipal ' hospitals. Its consummation may bring about a new unity amongst those whose common concern is the welfare of the sick, and it might well be regarded as a great pioneering project and serve as an example to the rest of the country. Given mutual co-operation and confidence, and a mutual respect for the great benefits which both systems have rendered, and can continue to render to mankind, there is no reason why any remaining difficulties should not be completely and permanently removed. In a recent letter to the *Times*, the president of the Royal College of Surgeons said : ' The great need of the moment is to bring together those who are natural partners in the planning of a health service and to get them to go forward in full partnership in the pursuance of their splendid purpose.' It is in that spirit that I hope we shall approach the scheme now under consideration. Its realisation will, I am convinced, prove to be a valuable contribution to the future health service of the country."

This arrangement and even more important, the excellent personal relationships which in the discussions were developed both on the member level and on the staff level constitute an excellent preparation for the National Health Service.

Radiotherapy.

During the year discussions took place with the authorities of the Middlesex Hospital, with the object of coming to an agreement whereby that hospital would provide for the Council's hospitals, and possibly at some later date for the whole of the County, a complete radiotherapy service.

The County Council in December, 1945, considered the following report from the Public Health Committee :—

"In January of this year your Committee formed the opinion that the time was approaching when preliminary consideration should be given to the plans to be made for the development of facilities for radiotherapy for the people of Middlesex.

Radiotherapy, which comprises treatment by radium and by X-rays, has its principal application in the treatment of cancer. It is one of the most highly specialised branches of medical science, and in addition to very elaborate and expensive apparatus needs for its effective fulfilment a team of experts—radiotherapists, surgeons, pathologists, physicists and technicians.

It is thus a speciality which particularly lends itself to concentration in a small number of large units, rather than to being developed at a number of small centres, none of which could profitably carry the large and highly specialised staff and equipment which the effective exploitation of radiotherapy demands. The subject, moreover, is one in which knowledge is rapidly expanding, and in which the need for fresh knowledge is very great. It is most desirable, therefore, that the radiotherapy centres of the future should not be static, but should have full facilities for research in physics and technology as well as in the clinical and pathological sides of the subject.

In 1928 the late Edmonton Board of Guardians set up a radiotherapy department at the North Middlesex Hospital in the charge of the late Dr. Spencer Mort. This was a far-sighted pioneer effort and the department has done valuable work. On Dr. Mort's death in 1932, the County Council appointed Mr. B. W. Windeyer, F.R.C.S. (now Professor of Radiotherapy in the University of London), to take charge of the department as a visiting specialist. Professor Windeyer visited regularly till the early days of the war when the claims of his own department at the Middlesex hospital prevented his further attendance at the North Middlesex County Hospital, save on occasion. He thereupon delegated this duty to one of his chief assistants until shortage of medical staff made this impossible, and since August, 1944, the department at North Middlesex County Hospital has been running without a consultant head.

When established in 1928 the department at North Middlesex Hospital was up to date, and in conformity with the accepted ideas of the time. Such, however, have been the great advances in radiotherapy that, judged by modern standards, the department now leaves a great deal to be desired. It is housed in a cramped temporary building, the deep X-ray machines are obsolescent, the amount of radium carried (500 mgms.) is insufficient for certain types of treatment, there is no consultant in charge or a physicist (both should really be whole-time, but the department has always been far too small to warrant this) and there are not, and cannot be, facilities for organised research. It appeared to your Committee in January, therefore, that the time was fast approaching when it would be necessary to consider whether it was justifiable to continue to treat in this department patients whose lives in some cases were at stake, when better facilities for their treatment might exist elsewhere.

It appeared to your Committee that there were two courses available to the Council. Firstly it could build, practically from the ground, a completely new, large radiotherapy department, staff and equip it on the lines indicated in the opening paragraphs of this report and provide facilities if possible for research. This would be a great undertaking and would, it appeared, be subject, even post-war, to the sanction of the Minister of Health, who would be guided in coming to a decision by the extent of existing facilities in the London region. As an alternative the County Council might enter into arrangements with an existing radiotherapy unit of repute whereby the latter would undertake the treatment by radium or X-rays of patients referred from any Middlesex County Hospital. It was desirable that either scheme should discharge the Council's obligations (so far as applicable to radiotherapy) under the Cancer Act, 1939, which may shortly come into operation, and either would need to provide for :—

(1) A sufficiency of beds for persons undergoing radium or X-ray treatment as in-patients.

(2) An out-patient clinic at some convenient centre, both for the giving of treatment to out-patients and for the follow-up and periodical review of patients who have had treatment.

(3) Arrangements whereby consultant radiotherapists would periodically visit the County hospitals and consult at the bedside with the physician or surgeon in charge of the patients for whom radiotherapy might be an effective line of treatment.

In connection with the alternative mentioned above, it appeared, as a result of an entirely informal and unofficial contact, that there were grounds for hoping that some kind of partnership between the County Council and the Middlesex Hospital might be arranged with reference to radiotherapy (and possibly other matters also), which would be mutually advantageous. The Middlesex Hospital has, under the leadership of Professor Windeyer, one of the finest radiotherapy centres in the whole country. Since the war, the hospital has taken over the staffing of a great part of Mount Vernon Hospital, Northwood, which has been greatly expanded under the Emergency Hospital Scheme. At Mount Vernon Hospital there are some 200 beds for radiotherapy cases together with up-to-date apparatus under the charge of Professor Windeyer and his staff, and patients are

treated both there and at the Middlesex Hospital. Out-patient work, clinical assessment and post-operative supervision are conducted almost entirely at the Middlesex Hospital, Berners Street, W.1, which is convenient of access from all parts of the County of Middlesex.

Your Committee had no information as to what the future of Mount Vernon Hospital and its extensions might be after the war, but it appeared to be within the bounds of possibility that the Middlesex Hospital may take over a part or the whole of the hospital. In that event it seemed that they would be able to provide the County Council with all the beds for radiotherapy that were required, and that, having regard to the Hospital's deservedly high reputation in the field of treatment, teaching and research, some kind of partnership, even at the cost of abandoning the unit at North Middlesex County Hospital, might not be disadvantageous to the County Council.

Your Committee could not come to any decision at once on a matter of this magnitude, but it asked the County Medical Officer of Health to discuss the matters indicated above with the authorities of the Middlesex Hospital, with a view to ascertaining what kind of arrangements and conditions could be made, and to report further at a later date.

A number of talks have taken place but, although the hospital has always shown great willingness to co-operate with the County Council, little progress was possible at first as the hospital was handicapped by the absence on war service of several of Professor Windeyer's principal assistants, by an insufficiency of deep X-ray therapy machines and by a lack of sufficient beds to provide for the potential needs for radiotherapy purposes of a population of two million persons. Since that time, however, several radiotherapists on Professor Windeyer's staff have been, or are about to be, demobilised. Additional machines it is understood are being acquired, and although shortage of beds still presents some difficulty it should be possible to start an interim scheme on the following lines in January, 1946 :—

Professor Windeyer or one of the senior radiotherapists on his staff would visit each of the seven County general hospitals weekly, or more often if required, to see and discuss with the clinicians on the County hospitals staffs all cases in which the use of radiotherapy might be considered as an effective means of treatment. These should include all new cases of cancer, the object being that the physician, surgeon or specialist in charge of the case, with the radiotherapist and perhaps the pathologist, should plan jointly the line of treatment to be followed. Should this include radiotherapy the patient would be transferred for this part of his treatment to the Middlesex Hospital. There are at the Middlesex Hospital, however, only some 70 beds allocated to radiotherapy, whereas to provide a full service for the population of Middlesex it is estimated that approximately double that number is needed. Until, therefore, the hospital succeeds in increasing its beds, by acquiring a country branch hospital, or by other means, various expedients would have to be adopted to make the limited number of available beds at Middlesex Hospital serve the greatest number of patients. It is for this reason that the present scheme is referred to as an interim one. Thus it would be necessary for certain patients to spend, in the Middlesex Hospital wards, the minimum number of days required for their actual radiation treatment, returning afterwards to their County hospital of origin for after-treatment and recuperation. Other types of in-patients in County hospitals, who were sufficiently fit, could be taken by ambulance to the radiotherapy department of the Middlesex Hospital, receive their treatment and be taken straight back to the County hospital without ever having been admitted to a bed in the Middlesex Hospital at all. It should be emphasised that these temporary expedients are intended to last only until the Middlesex Hospital has acquired more beds, and it is understood there is a reasonable prospect of this coming to pass in the fairly near future.

On the out-patient side certain cases would be followed up and their progress reviewed by the visiting radiotherapist at the County hospitals. Others, including all those needing a continuation of radiation treatment as out-patients, would be dealt with at the Middlesex Hospital.

With regard to terms, the cost of such a scheme as is outlined above can be considered under three separate headings :—

(1) *Payment for the services of visiting radiotherapists.*—It is calculated that the services rendered by Professor Windeyer and his team in the County hospitals would approximately consume the time of one whole-time radiotherapist. For this service an annual payment of £1,500 per annum is suggested to cover salary, travelling and other incidental expenses and the supervision which Professor Windeyer would himself exercise.

(2) *In-patient treatment at the Middlesex Hospital.*—This could best be paid for on a patient day basis. The radiotherapy beds at the Middlesex Hospital have not been separately costed, but the authorities there estimate that the cost of a radiotherapy bed is approximately £1 a week more than the average bed-week rate. As it is recognised that radiotherapy is a very expensive form of treatment this figure is reasonable. It is suggested therefore that payment should be made to the Middlesex Hospital at the rate of the average ascertained cost per bed-week (excluding cost of appeals and research), plus £1 per week for each Middlesex patient treated in the wards of that hospital under the scheme. It is difficult to state what this figure would be, as during the war years the hospital has been functioning with a very much reduced number of beds, while the overhead expenses have not diminished, but may have increased.

(3) *Out-patient attendances.*—It is suggested that the County Council should pay to the Middlesex Hospital a sum of 5*s.* per attendance for every Middlesex patient seen in the out-patient radiotherapy department at the Middlesex Hospital under the scheme, whether merely for consultation or whether treatment is given in addition.

It is understood that the above terms would be recommended to the Board of Governors of the Middlesex Hospital for their acceptance, and your Committee regards them as fair and reasonable.

Any scheme of financial arrangements would need to make provision for periodical review in view of the expansion of the service which is to be anticipated. Reconsideration of the financial arrangements will doubtless also be necessary in the light of the Government's new national health proposals when these are made known, and also in the event of the Middlesex Hospital obtaining further beds in a country branch hospital.

The scheme outlined above would, it is considered, go a long way to meet the County Council's obligations under the Cancer Act, and your Committee proposes that, if adopted by the County Council, it shall be submitted to the Minister of Health as an interim scheme under that Act; so far as it is approved by the Minister, it will attract grant. In connection with the Cancer Act a considerable amount of record keeping and clerical work is required, and your Committee proposes that, in addition to the expenditure referred to above, provision shall be made in this connection at the rate of a further £1,000 per annum. It should be pointed out that, if a scheme on the above lines is adopted and proves successful, as there is every reason to expect it would do, the small radiotherapy unit at the North Middlesex County Hospital would in a comparatively short time become redundant and would need to be closed down. This would involve terminating the appointment of the whole-time assistant radiotherapist on the staff at that hospital. The rest of the staff could doubtless be absorbed into other departments of the hospital and the premises devoted, with advantage, to some other purpose."

As a result of consideration of the foregoing report the County Council decided to adopt in its entirety the scheme which began to operate early in 1946.

Medical Education.

Post-graduate education of medical officers released from the forces.—Reference was made in the Annual Report for 1944 to a Government scheme for providing post-graduate medical education for doctors discharged from the forces. The scheme was evolved and arrangements were worked out while the war was still in progress, so that immediately upon the close of hostilities, so soon as demobilisation commenced, plans were all ready and it was possible to absorb men into hospital without any delay. The scheme was financed by the Treasury and administered for the Greater London area by the British Post-graduate Medical Federation.

There were two types of demobilised doctors for whom the County Council was asked to provide post-graduate educational facilities :—

(*a*) Practitioners recruited from general practice. For these men the Council's hospitals were asked to provide whole-time refresher courses of two weeks' duration, dealing with conditions likely to be encountered in general practice and with special reference to diseases of women and children. A course was arranged at Central Middlesex County Hospital in October, followed by one at West Middlesex County Hospital in December, each of which was attended by 20 demobilised medical officers.

(*b*) Practitioners recruited shortly after qualification or who on recruitment were training to become specialists. Insofar as vacancies for these men were not available within the hospitals' recognised establishments, the County Council was asked to create new posts of two grades :—

(i) Junior posts carrying a salary of £350 resident, with duties equivalent to those of a senior house officer (Class I).

(ii) Senior posts with a salary of £550 resident, and duties equivalent to those of a registrar (Class III).

During 1945, demobilisation did not proceed very far and the scheme accordingly did not get fairly under way until 1946, but by the close of 1945, eight doctors had been absorbed into Class I posts and seven into Class III posts.

Association with the British Post-graduate Medical School.—An approach was made to the County Council by the British Post-graduate Medical School with a proposal that the clinical teaching facilities of the school should be extended into certain of the County hospitals. It was represented that there is a considerable demand on the part of medical graduates from the provinces, Scotland, Ireland, the Dominions, India and the Colonies for systematised post-graduate education in the fundamentals of medicine and surgery. Up to the present this had been provided at the British Post-graduate Medical School at Hammersmith Hospital, but with the end of the war existing provision was insufficient and some extension of clinical facilities were needed.

What the County Council was asked to provide was a continuous course of instruction in clinical medicine and surgery in the wards and departments of one or more of the Council's hospitals which could be joined at almost any time by graduates for a period of some three to six months. Four days in the week would be spent at the County hospital with ward rounds, demonstrations and occasional lectures. One day would be spent at the headquarters of the British Post-graduate Medical School at Hammersmith Hospital for certain forms of more academic medical education which it was considered could be more satisfactorily carried out in that place with the resources there available. Saturday mornings would be left free for the men to attend the practice of the County hospital if they so desired.

All arrangements for selecting students and collecting their fees would be undertaken by the British Post-graduate Medical School who would pay over to the County Council an agreed proportion in respect of the facilities and teaching provided at the County hospitals.

The County Council readily acceded to the request and it was arranged that the class in clinical medicine should be held at Redhill County Hospital and that in clinical surgery at North Middlesex County hospital. The scheme came into operation in April, 1946.

Nursing Staff.

Throughout the war the County hospitals had suffered from an insufficiency of nursing staff, which whilst not acute was nevertheless a source of anxiety to those responsible for the administration of the hospital service. The origin of the shortage arose from the great expansion in the number of hospital beds which the war brought about. These beds, most of which were provided in improvised or temporary accommodation, were intended to meet an emergency and were not created with a long term plan in view. In consequence, additional nurses' home provision was of a somewhat sketchy nature and considerable reliance was placed upon private billets as a means of housing the additional nursing staff employed. With the end of the war and the return of demobilised men to their families, coupled with the acute housing shortage, this source of lodging began to dry up. Moreover, with the return of peace, nurses not unnaturally began to show a disinclination to be satisfied with sub-standard and often overcrowded living quarters which in a time of national crisis they had been very willing to accept.

The shortage of nurses was accentuated by a shortage of hospital domestics, which resulted in an already overburdened nursing staff being frequently called upon to undertake domestic duties in addition to their heavy nursing work. In accordance with what one has learned to expect of the nursing profession the nurses accepted the position and undertook many uncongenial tasks outside their province in order that their patients should not suffer, but in spite of all efforts the County hospitals towards the close of the year took on a shabby and unkempt look very different from their normal appearance.

Ward Orderlies.—As a means of easing the burden on the nursing staff the County Council approved in November a scheme for the employment of ward orderlies. These are women (or men) whose duties comprise work such as cleaning baths, sluices and utensils, the dusting of lockers, the setting of patients' meal trays, helping to feed under supervision certain types of patients in need of assistance, helping domestic staff in washing up, the sorting of linen, the escorting of ambulant patients to the X-ray or massage departments, etc. It is intended that ward orderlies should wear an attractive uniform and should be employed at the rate of about two per ward. The matrons welcomed the proposal.

Training of Male Nurses.—At the beginning of the year the County Council adopted a proposal to provide in certain of its hospitals general nursing training of male students. They were actuated in this decision by two considerations :—

(i) A Rushcliffe Report, published at the beginning of 1945, made it clear that for the higher posts in the mental hospital service a double qualification would be necessary, *i.e.*, one in mental and in general training. As a result a few enquiries were received from State registered male mental nurses in the Council's mental hospitals as to the possibility of acquiring general nursing training in the Council's general hospitals. It was thought that with the return from the Forces of many mental nurses the demand might be increased.

(ii) The shortage of women nurses was most keenly felt at the Council's sanatoria and gave rise to the idea that some of the male wards there might be staffed with male nurses. Again it was felt that some men discharged from the Army, where perhaps they had been engaged in nursing duties, might wish to train and adopt nursing as a career.

Matrons of the Council's general hospitals saw no difficulty in accepting male students for training. They would join existing classes and receive with very slight modification the same training as the women students.

A scheme was therefore prepared on the following lines and submitted to and approved by the General Nursing Council :—Harefield County Hospital would accept men students for two years' training in which time they should pass the State Preliminary Examination and obtain the certificate in tuberculosis nursing of the Tuberculosis Association. They would then proceed to Redhill County Hospital for a further two years' general training in preparation for the State Final Examination and admission to the general part of the State Register. Redhill County Hospital would also accept State registered mental nurses for two years' general training for the general part of the State Register.

The scheme was soon put into operation and a number of men student nurses recruited at both hospitals.

INSPECTION AND SUPERVISION OF FOOD.

The Acts and Regulations governing the supervision of food supplies which are administered by the County Council deal with (*a*) certain powers and duties connected with the production of milk, and (*b*) adulteration of food.

Milk Production.

Samples of milk are taken by inspectors of the Public Control Department either in course of retail or at the farms of origin, when these are situated in Middlesex, and submitted to examination for the presence of tubercle bacilli in the pathological laboratory of Harefield County Hospital. Prior to 1943 these examinations were carried out at the Lister Institute of Preventive Medicine and Harefield County Hospital commenced operations in May, 1943. The arrangements have continued to work very smoothly.

The following tables shows the results which have been obtained for each of the last ten years :—

Year.	Number of samples for which a definitc result was obtained.	Number containing living tubercle bacilli.	Percentage of tubercle-infected milk
1936	292	20	6·8
1937	282	16	5·7
1938	278	16	5·7
1939	193	10	5·1
1940	267	19	7·1
1941	285	16	5·6
1942 (Jan.–June)	136	6	4·4
1943 (May–December) ...	256	4	1·6
1944	384	17	4·4
1945	376	8	2·1

Four of the 8 infected samples were produced in Middlesex. Diseased animals were traced at six of the farms concerned, three of these being in Middlesex, and ten cows were slaughtered.

It will be noted that the percentage of samples revealing the presence of tubercle bacilli is lower than in any previous year except 1943, which cannot be considered comparable as the new arrangements for the examination of samples at Harefield only came into operation during the second half of the year and at the commencement full tests by animal inoculation were not possible, reliance having to be placed on cultural methods only. Thus there are grounds for hoping that the Government's scheme of attestation of dairy herds, and the encouragement of the production of tuberculin-tested milk under licence, is beginning to bear fruit in a definite reduction in the incidence of tuberculosis among the herds.

The routine veterinary inspection of Middlesex herds is carried out by officials of the Ministry of Agriculture. The Divisional Inspector of the Ministry furnishes the County Council with information as to the results of veterinary inspections and tuberculin tests of Middlesex herds. The figures for the past six years are set out in the table below :—

Year.	Number of clinical examinations of bovine animals.	Number found in which tuberculosis was suspected.	Number slaughtered.	Number in which diagnosis was not confirmed.
1940	7,000	28	22	6
1941	9,307	14	11	3
1942	8,582	21	18	3
1943	10,350	16	16	—
1944	5,279	20	19	1
1945	5,507	18	17	1

Milk (Special Designations) Orders, 1936 and 1938.—The County Council is responsible under these Orders for the granting of licences for the production of Tuberculin-tested and Accredited milk. Before the issue of any such licence, the farm concerned is visited by Dr. Perkins, accompanied by the Milk Production Officer on the staff of the War Agricultural Executive Committee, or his assistant, and an enquiry is conducted into the condition of the premises and the herd and the suitability of the technique adopted. Notice of the visit is also sent to the local sanitary authority of the district where the farm is situated and usually either the medical officer of health or the senior sanitary inspector attends.

Following the issue of licences, regular routine samples of milk in the course of production are taken at the farms, and submitted to biochemical and bacteriological investigation with a view to ascertaining that a satisfactory standard of cleanliness is being maintained.

During 1945, licences for the production of Tuberculin-tested milk were granted to 14 farmers, while 32 received licences for the production of Accredited milk. Seven of the herds belonging to holders of T.T. licences were also attested under the scheme of the Ministry of Agriculture.

The system of co-operation between the County Council, the local sanitary authorities and the Middlesex War Agricultural Executive Committee, which was set out in last year's report, has continued in effective operation.

Adulteration.

The Acts and regulations dealing with adulteration of foods and drugs are administered by the Public Control department of the County Council. I am indebted to Mr. S. J. Pugh, Chief Officer of that department, for information regarding this branch of work.

During 1945, 1,424 samples, of which 44 were found to be adulterated or not up to standard, were submitted for examination by the County Analyst.

In addition to the above, 2,408 samples were examined by officers of the Public Control department.

No action was taken during the year under the Public Health (Dried Milk) Regulations, 1923 and 1927, or the Public Health (Condensed Milk) Regulations, 1923 and 1927.

Defence (General) Regulations, 1939—Regulation 55G.

In January, 1944, Regulation 55G was made under the provisions of the Defence Regulations. This regulation empowers the Minister of Food to require that in areas " specified " by him all milk supplied to consumers, other than Accredited or Tuberculin-tested, shall be either pasteurised, heat-treated, or sterilised. Prescribed tests for ascertaining whether milk has been subjected to the proper treatment, have been laid down. The County Council is charged with the enforcement of the Regulation and is required to arrange for the sampling and testing of all the classes of milk covered by the Regulation.

Samples of " designated " milk taken at the farms on behalf of the County Council in pursuance of its function as the Licensing Authority, under the arrangements made by the Public Health Committee, are not affected by the Regulation. Other samples, taken in pursuance of the requirements of Regulation 55G, are procured and dealt with through the Public Control Department of the County Council.

The following table which has been supplied to me by Mr. Pugh, sets out details of the samples taken by officers of his department during 1945.

Particulars of Samples of Milk procured by Officers of the Public Control Department during the period May–December, 1945, in pursuance of Regulation 55G of the Defence (General) Regulations, 1939.

	Passed.	Failed.	No Test Applied.	No. of Samples Examined.
Pasteurised Milk—				
Phosphatase test	157	16	—	173
Methylene blue test...	108	20	45	
Tuberculin Tested (Pasteurised) Milk—				
Phosphatase test	9	—	—	9
Methylene blue test...	9	—	—	
Heat-treated Milk—				
Phosphatase test	85	37	—	122
Methylene blue test...	60	30	32	
Sterilised Milk—				
Phosphatase test	31	—	—	31
Methylene blue test...	22	—	9	
Total number of samples examined during period				335

All samples were subjected to the tests prescribed by the Heat-treated Milk (Prescribed Tests) Order, 1944, except where it was not possible to keep samples at an atmospheric shade temperature not exceeding 65° Fahrenheit in which cases no Methylene Blue Test was applied.

CIVIL DEFENCE CASUALTY SERVICE.

The year 1945 saw the long awaited end to hostilities in Europe and the disbandment of civil defence forces after a period of almost six years' service.

The attack by long range rockets which had begun in September, 1944, continued in the early months of 1945 and increased in intensity. Some of the incidents caused by these projectiles produced large numbers of casualities and created a sudden heavy demand on the mobile casualty services and casualty receiving hospitals. Owing to the higher explosive strength and the absence of any warning, a greater number of casualties were buried or trapped under the débris of demolished buildings following rocket incidents, and the proportion of serious injuries requiring hospital treatment was greater than those previously caused by flying bombs or bombs dropped by enemy aircraft.

The casualty services, though now much reduced in strength, maintained the high standard of work they had achieved in the handling of casualties and their proper treatment according to the nature of the injuries. During the period of rocket attack, September, 1944, to March, 1945, the civil defence ambulance service conveyed 1,906 casualties.

With the advance of the allied forces and the capture of the launching sites in Holland, the attack by rockets came to an end in March, as also did the operational action of the casualty services, since no further incidents occurred before the hostilities in Europe ended.

As from VE day action was taken in accordance with Government plans to disband the civil defence services, and on the 1st July the civil defence casualty service, administered by the County Council, ceased to exist, leaving behind a record of work well done and services performed in a self-sacrificing and loyal manner. As the service was disbanded efforts were made to absorb into the County Council's medical service nurses, nursing auxiliaries and other suitably trained personnel, who had served in first aid posts, mobile first aid units and ambulances. Many staff vacancies existed in the Council's hospitals and ex-members of the casualty service were urged to undertake hospital work. Whole-time or part-time employment was provided for a number of suitable applicants, but after years of war service many were unable to accept, or were unsuitable for employment in hospitals for domestic or physical reasons.

Throughout the war, in addition to operational duties in air raids, the ambulance service played a considerable part in the inter-hospital transfer of patients, the evacuation of patients from hospitals in the London region and the transfer of service sick or wounded arriving in this country. In this connection use was made of London Passenger Transport Board's Green Line coaches and ambulance vehicles of the American Red Cross, as well as Civil Defence ambulances and cars. These services continued after the end of the war in Europe and the Far East and at the request of the Ministry of Health the administration of the service in the County area was continued until the end of the year when the volume of work decreased to proportions which could be handled by Regional Ambulance Headquarters. The following table gives particulars of the work carried out by the ambulance service during 1945, apart from the transfer of casualties at raid incidents. The number of calls for coaches to transport workmen engaged in the repair of damaged dwellings in the London region is also shown :—

	No. of Calls.	No. of Patients.
Green Line coach ambulances...	1,294	20,855
American Red Cross ambulances	1,117	2,336
Civil Defence ambulances and cars (until disbanded at end of June) ...	929	1,628
Total	3,340	24,819
Number of calls for " repair coaches "	5,583	—

I would take this opportunity of placing on record my sincere appreciation of the assistance given to me by my colleagues the Medical Officers of Health and Civil Defence Medical Officers in the boroughs and districts within the area for which the County Council was the scheme-making authority for civil defence purposes. The demands made upon their services in connection with the organisation, administration and operational control of the casualty services comprising static first aid posts, mobile first aid units, ambulance depots and gas cleansing stations, were considerable. The co-operation which they gave so readily to my staff and myself contributed in no small measure to the high standard of efficiency that was attained and referred to on several occasions by higher authorities.

I would also pay tribute to all members, part-time and whole-time, of the civil defence casualty services for the work they performed often in circumstances of extreme discomfort and danger. The high standard of their morale and the efficiency with which they carried out their duties is worthy of the highest praise and they may all feel justifiably proud of their war service.

MATERNITY AND CHILD WELFARE.

Administration of Midwives Acts, 1902–1936.

Area.—Throughout 1945 the County Council was the Local Supervising Authority for the whole of the county, with the exception of the Boroughs of Ealing, Edmonton, Hendon, Heston and Isleworth, Tottenham, Twickenham and Willesden, and the urban districts of Enfield and Harrow.

Domiciliary Service of Midwives.—The number of confinements attended by the domiciliary midwives engaged in carrying out the Council's scheme was less than in 1944 as increasing housing and domestic difficulties led to a greater number of institutional confinements during 1945.

The following table sets out particulars of the number of whole-time salaried midwives engaged in the various parts of the Council's area, whether employed by the County Council or by local welfare councils on their behalf, or by voluntary associations subsidised by the County Council; together with information as to the number of confinements attended in the capacity of either midwife or maternity nurse. One additional midwife was engaged for duty in Ruislip.

Borough or District.	Midwives employed by.	Number of whole-time salaried midwives at end of year.	Confinements attended.
Acton	Queen Charlotte's Hospital ...	4	402
Brentford and Chiswick ...			
Feltham	County Council	6	266
Finchley	Borough Council	4	182
Friern Barnet	County Council	2	69
Hayes and Harlington ...	,, ,, ...	7	365
Hornsey	Borough Council	6	343
Potters Bar	South Mimms, Potters Bar, and Bentley Heath Nursing Association	2	67
Ruislip-Northwood	County Council	5	265
Southall	Borough Council	5	202
Southgate	Southgate Queen's Nursing Association	3	143
Staines—			
Ashford	Ashford District Nursing Association	2	89
Laleham and Staines ...	Staines and Laleham Nurse Society	2	76
Stanwell	Stanwell District Nursing Association	2	72
Sunbury—	County Council	2	76
Shepperton	Shepperton and Littleton District Nursing Association	1	61
Uxbridge	County Council	5	238
Wembley	Kingsbury District Nursing Association	2	191
,, ...	Wembley District Nursing Association	3	281
Wood Green	Borough Council	3	183
Yiewsley and West Drayton	County Council	3	160
	Totals	69	3,731

Hospital Saving Association Scheme—During 1945 the Hospital Saving Association made payment to the County Council in respect of each confinement of a woman contributor or the wife of a contributor attended by a midwife under the Council's midwifery service. No charge is made to the woman for the midwife's services, or for those of a doctor, should one be summoned by the midwife to her aid.

Births Attended by Midwives.—Of the total number of midwives residing in the area of Middlesex supervised by the County Council, who notified their intention to practise, returns were received from 108 who had actually practised in 1945, setting out the number of cases attended by them in the capacity of midwife or maternity nurse. Medical officers of health of boroughs

and urban districts in the County, which also are local supervising authorities, have been good enough to supply me with similar information relating to their respective districts, so that it has been possible to compile the following comprehensive table referring to the entire administrative county.

Boroughs and Urban Districts.	Births attended by Midwives.		Births at which Midwives acted as Nurses.	
	In patients' homes.	In nursing homes.	In patients' homes.	In nursing homes.
Acton ... ... } Brentford and Chiswick ... }	376	—	26	—
Feltham	230	—	36	—
Finchley	156	37	26	60
Friern Barnet	75	—	30	—
Hayes and Harlington	409	—	49	64
Hornsey	321	—	22	122
Potters Bar	32	—	57	—
Ruislip-Northwood	256	30	45	158
Southall	230	131	23	59
Southgate	86	10	59	546
Staines	135	—	102	—
Sunbury	118	—	19	—
Uxbridge	202	21	103	34
Wembley	286	14	186	3
Wood Green	152	—	68	—
Yiewsley and West Drayton ...	137	—	23	—
Attended by midwives residing outside the County Council's area ...	19	—	6	—
Totals	3,220	243	880	1,046
Ealing	438	94	120	229
Edmonton	538	—	104	—
Enfield	559	—	241	—
Harrow	593	65	241	717
Hendon	400	2	143	36
Heston and Isleworth	308	5	61	282
Tottenham	786	—	119	—
Twickenham	279	7	101	214
Willesden	536	—	166	24
Grand Totals	7,657	416	2,176	2,548

The total number of births in the whole County in 1945 was 33,398, and 8,073 (24 per cent.) of these were attended by midwives, whilst 4,724 (14 per cent.) were attended by practising midwives in the capacity of maternity nurses.

NOTIFICATIONS.—The numbers of notifications received from midwives, in accordance with the Rules of the Central Midwives Board, during the years 1941–45, were as follows :—

Notifications of :—	1941.	1942.	1943.	1944.	1945.
Sending for medical assistance	1,483	1,582	1,508	1,588	1,302
Still-birth	68	62	73	59	35
Death of infant	29	47	35	33	26
Death of mother	1	2	1	—	—
Laying out the dead	23	16	15	16	18
Artificial feeding	58	64	67	72	85
Liability to be a source of infection ...	121	150	143	121	86
Totals	1,783	1,923	1,842	1,889	1,552

MATERNAL DEATHS.—No deaths occurred of any women attended by a midwife.

The maternal death-rate for all births in the administrative County during 1945 was 0·99 per 1,000.

PUERPERAL PYREXIA.—The following table records the number of notifications of puerperal pyrexia (*a*) in the county generally, and (*b*) in the area for which the County Council is the local supervising authority, together with details concerning midwives' cases in the latter area.

Year.	Births registered.		Cases notified.		Deaths from puerperal sepsis.		Births attended by Midwives.	Cases notified in the practices of Midwives.	Deaths from puerperal sepsis in the practices of Midwives.
	(*a*)	(*b*)	(*a*)	(*b*)	(*a*)	(*b*)	(*b*)	(*b*)	(*b*)
1940	29,517	12,573	361	75	18	11	4,924	21	1
1941	26,927	11,719	408	104	23	8	4,320	19	Nil
1942	33,150	14,224	552	177	23	15	4,755	29	Nil
1943	35,339	15,076	639	171	33	16	4,483	26	3
1944	36,380	15,606	541	166	13	7	4,381	10	2
1945	33,398	14,203	491	147	9	3	3,463	7	Nil

OPHTHALMIA NEONATORUM.—Medical assistance was sought by certified midwives on account of inflammation of, or discharge from, infants' eyes in 99 instances; and in 7 of these cases the medical practitioners called in notified the condition as ophthalmia neonatorum. No apparent injury to vision resulted in any instance.

DISCIPLINARY ACTION.—The conduct of one midwife was reported to the Central Midwives Board during 1945. The case was heard in October, and after due consideration the Board decided to remove the midwife's name from the Roll.

VISITS OF INSPECTION.—Visits made by the Council's supervisors of midwives may be classified as follows:—

Visits to State certified midwives	598
,, patients' homes for supervision of nursing visits, etc.	3
,, premises in connection with the registration of nursing homes	20
,, registered nursing homes	150
,, ante-natal clinics and welfare centres	53
,, homes of foster-mothers in connection with child life protection	3
,, other persons in connection with investigations under the Midwives Acts, &c.	42
,, in connection with home help scheme	92
,, ,, ,, ,, agencies for the supply of nurses	10
Total...	971

POST-CERTIFICATE INSTRUCTION.—Arrangements were made for seven midwives to receive a course of instruction in the administration of gas and air analgesia. Two courses of post-certificate instruction in midwifery, arranged in conjunction with the London County Council, were held, at which sixty-four midwives from the area supervised by the County Council attended.

PAYMENT OF FEES TO MEDICAL PRACTITIONERS.—The following table gives information regarding fees paid by the County Council to medical practitioners called in by midwives on account of illness or abnormality occurring during pregnancy, labour or puerperium.

A	B		C	D
Number of notifications of sending for medical aid.	Number of claims for fees received.	Percentage of B to A	Total amount due to doctors in respect of cases attended by them during financial year.	Income from patients in respect of doctors' fees
			£ *s.* *d.*	£ *s.* *d.*
1,302	768	58·98	1,174 9 0	234 16 6

Nursing Homes.

The following table shows the number of registered nursing homes in each borough and urban district for which the County Council is the authority for the supervision of nursing homes. The figures in brackets indicate the number of homes devoted, either wholly or in part, to the reception of maternity cases.

Boroughs and Urban Districts.	Number of Nursing Homes on Register at end of year.	Approved accommodation (beds) at end of year.
Acton (*Borough*)	3 (0)	8
Brentford and Chiswick (*Borough*)	1 (0)	6
Feltham	1 (0)	6
Finchley (*Borough*)	13 (3)	101
Friern Barnet	1 (1)	5
Hayes and Harlington	1 (1)	4
Hornsey (*Borough*)	10 (4)	73
Potters Bar	0 (0)	0
Ruislip-Northwood	6 (5)	29
Southall (*Borough*)	2 (1)	29
Southgate (*Borough*)	7 (7)	61
Staines	1 (0)	13
Sunbury	2 (1)	48
Uxbridge	3 (1)	29
Wembley (*Borough*)	4 (2)	22
Wood Green (*Borough*)...	1 (0)	4
Yiewsley and West Drayton	0 (0)	0
Totals ...	56 (26)	438

The registration of one nursing home was cancelled during the year.

Births Occurring in Nursing Homes.—The following table sets out particulars of births which occurred in nursing homes.

Attended by	County Council's Area.	Ealing	Edmonton	Enfield	Harrow	Hendon	Heston & Isleworth	Tottenham	Twickenham	Willesden	Administrative County
(*a*) Doctors ...	1,725	403	0	0	905	217	282	0	275	24	3,831
(*b*) State certified midwives, no doctor being in attendance ...	243	94	0	0	65	2	5	0	7	0	416
Totals ...	1,968	497	0	0	970	219	287	0	282	24	4,247

Unregistered Nursing Home.—Legal proceedings were instituted against the keeper of a home which was being carried on as a nursing home without being duly registered.

Maternity and Child Welfare Service.

The County Council is the authority for maternity and child welfare in 9 of the 26 districts included in the administrative County, viz., the Urban Districts of Feltham, Friern Barnet, Hayes and Harlington, Potters Bar, Ruislip-Northwood, Staines, Sunbury, Uxbridge, and Yiewsley and West Drayton.

The following is a summary of certain statistics relating to the maternity and child welfare area of the County Council :—

Area	53,535 acres
Population (estimated by Registrar-General)	308,210
Live births	5,486
Birth-rate	17·8
Number of infant deaths	234
Infantile mortality rate, per 1,000 live births	42·7
Number of maternal deaths	3
Maternal mortality rate, per 1,000 total births	0·53
Number of cases of puerperal pyrexia	79
,, ophthalmia neonatorum	11

During 1945 no additional health visitors and school nurses were engaged and no new centres were opened. Owing to increased attendances, additional weekly sessions were started at Spelthorne Welfare Centre and Uxbridge ante-natal clinic.

Orthopaedic Service.—Arrangements are in operation whereby children below the age of five in attendance at the welfare centres can receive treatment at the orthopaedic clinics dealing with school children. Thirty-eight children were referred during 1945.

Child Guidance Service.—Problem children in need of investigation and treatment by psychiatrists are referred to the child guidance clinics established by the Education Committee at Harrow and Twickenham. Parents, except in necessitous cases, are asked to contribute 5*s.* for a course of treatment. Seventeen children were referred for treatment during 1945.

Illegitimate Children.—The arrangement with the British Red Cross Society for the admission of unmarried mothers and their babies to a post-natal hostel was continued during 1945, and the scheme was extended to include an ante-natal hostel for the accommodation, prior to confinement, of expectant unmarried mothers who, for various reasons, could not remain in their own homes, or had no homes. During the year there were 43 admissions to the ante-natal hostel and 58 to the post-natal hostel.

Attendances at Welfare Centres.—The following table gives the attendances of women and children at the Council's welfare centres :—

Ante-natal Clinics—	
Number of sessions held	1,434
New cases attending	3,710
Post-natal cases attending	525
Total attendances	19,228
Welfare Centres—	
Number of sessions held	3,621
New cases attending—	
Expectant mothers	91
Infants under 1 year of age	4,598
Children (1 to 5 years)	781
Attendances—	
Expectant mothers	517
Mothers attending with infants	120,705
Infants	80,982
Children (1–5 years)	53,399
Total attendances	255,603
Average attendance of infants and children each session ...	37

Maternity and Child Welfare.

Home Visits by Health Visitors.—The home visiting undertaken by the County Council's health visitors is shown in the following table :—

Pre-natal visits	3,981
Visits to infants under 1 year	22,191
Visits to children (1–5 years)	24,179
Total home visits	50,351
Total number of visits to individual families	42,860

Provision of Milk, &c.—The following table gives information as to the cost of fresh and dried milk, &c., issued at the centres during the *financial* year 1945–46 :—

Year 1945–46.	Cost price.	Contributed by mothers.	Charge on scheme.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Fresh milk	1 9 0	Nil.	1 9 0
Dried milk	6,854 6 7	6,013 16 0	840 10 7
Cod-liver oil, malt, &c.			
Totals	6,855 15 7	6,013 16 0	841 19 7

HOME HELPS.—This scheme has been continued throughout the year 1945.

Further appointments are being made whenever suitable women can be found to undertake the work in the districts in which they are required, and by the end of the year twenty-nine such women were employed by the County Council as whole-time home helps.

TREATMENT OF OPHTHALMIA NEONATORUM.—During 1945, 11 cases of ophthalmia neonatorum were notified in the area for which the County Council is the authority for maternity and child welfare. One infant was treated at home and the remainder in the hospitals in which they had been born. All the infants made satisfactory recoveries.

DENTAL TREATMENT.—In order to encourage expectant and nursing mothers to take advantage of the Council's scheme for dental treatment a nominal fee of 2*s.* 6*d.* only is now charged to cover all extractions and fillings required by a mother during her pregnancy and the twelve months following confinement.

The following table gives particulars of the dental work which has been carried out under the Council's maternity and child welfare scheme :—

	Expectant Mothers.	Nursing Mothers.	Totals.
Attendances	7,192	4,923	12,115
Examined	1,835	513	2,348
Referred	1,779	493	2,272
Actually treated	1,333	600	1,933
Extractions	4,919	2,464	7,383
Fillings	3,857	1,600	5,457
Local anaesthetics	834	443	1,277
General anaesthetics	845	366	1,211
Other operations	2,049	1,309	3,358
Dental dressings	631	1,796	2,427
Dentures fitted	200	709	909
Treatments completed	389	127	516
Appointments not kept	2,209	1,075	3,284

Maternity and Child Welfare.

	Welfare Children.	Nursery Children.	Totals.
Attendances	3,388	642	4,030
Examined	1,327	*470	1,797
Referred	1,103	*209	1,312
Actually treated	1,053	304	1,357
Extractions	1,512	159	1,671
Fillings	2,198	572	2,770
Local anaesthetics	43	3	46
General anaesthetics	509	58	567
Ethyl chloride	24	8	32
Other operations	500	89	589
Silver nitrate applications	893	234	1,127
Treatments completed	1,028	250	1,278
Appointments not kept	661	102	763

* These totals include inspections at day nurseries.

This table includes the dental inspection and treatment of expectant and nursing mothers and children below school age who attend welfare centres in the Boroughs of Southall, Southgate and Wembley and the Urban District of Harrow.

The number of births in the County Council's welfare area during the year was 5,486. The number of expectant mothers dentally inspected was 1,008, or approximately 18·4 per cent. of the whole.

Child Life Protection.

The position to the end of 1945 was that there were 179 persons on the Council's register receiving 238 children.

No deaths were reported during the year.

The following visits were paid by the Council's child protection visitors :—

First visits	118
Subsequent visits	932
Special investigations	3

The Adoption of Children (Regulation) Act, 1939.

The above Act came into force on 1st June, 1943. In accordance with Section 2, adoption societies are required to apply for registration, and three societies, whose offices are situated in the County of Middlesex, have been registered :—

Church of England Waifs and Strays Society	Joel Street, Pinner.
Harrow and Willesden Ruri-Decanal Association for Moral Welfare Work	4, Peterborough Road, Harrow.
Homeless Children Aid and Adoption Society and F. B. Meyer Children's Home	Wood Green.

Section 7 (3) of the Act makes it a duty for persons, other than adoption societies, participating in arrangements for adoption, to give notice in writing of the arrangements to the welfare authority for the area in which the adopter resides. The authority's child protection visitors then supervise any child received by the adopters until legal adoption has taken place or the child attains the age of nine years. 26 persons gave notice in accordance with this Section to the County Council as welfare authority and informal notification was received in connection with a further 27 adopters. Legal adoption was completed in 75 instances and at the close of the year proceedings were pending in a further 18.

Wartime Nurseries.

At the close of 1944, 29 wartime day nurseries were in operation. Owing to the shortage of staff and low attendance of children during 1945, it became necessary to close the Ruislip Gardens and Laleham nurseries in June and October respectively.

The accommodation provided, and average daily attendances are set out in the following table :—

Name of Nursery.	Accommodation.	Average daily attendance.
Avondale Road Nursery, Ashford	50	28
Park Road Nursery, Ashford	50	43
Woodthorpe Road Nursery, Ashford	40	25
Bedfont Nursery	40	36
Central Feltham Nursery	50	42
Feltham Hill Nursery	40	26
Bear Road Nursery, Hanworth	50	28
Mountside Nursery, Hanworth	40	26
Bourne House Nursery, Hayes	40	26
Grange Park Nursery, Hayes	80	47
Lannock Road Nursery, Hayes	50	30
Nestle's Avenue Nursery, Hayes	50	39
Peter Pan Nursery, Hayes	50	29
Wood End Park Nursery, Hayes	40	28
Yeading Lane Nursery, Hayes	40	33
Oak Farm Nursery, Hillingdon	80	47
South Hillingdon Nursery	50	30
Laleham Nursery (closed 30.10.45)	40	17
Ruislip Gardens Nursery (closed 22.6.45)	50	28
Ruislip Manor Nursery	40	28
South Ruislip Nursery	50	39
Shepperton Nursery	50	30
Staines Nursery	40	29
St. Anne's Nursery	50	36
Sunbury Nursery	40	21
High Street Nursery, Uxbridge	50	34
Cowley Road Nursery, Uxbridge	32	24
West Drayton Nursery	50	33
Yiewsley Nursery	40	23

Total number of attendances in nurseries open for the whole year ... 232,017
Total number of places in nurseries open for the whole year 1,282
Total average daily attendances in nurseries open for the whole year ... 860

For nurseries open throughout the whole year, the average daily attendance was about two-thirds of the number possible, which is a similar figure to that which obtained in 1943 and 1944.

There was a high incidence of measles in the nurseries and this was in accordance with expectations as only a few cases had occurred in the previous year. The number of cases of whooping cough occurring during the year was 43, and none of these was in a child attending a nursery where immunisation against whooping cough is carried out as routine. The numbers are, however, too small to draw any definite conclusions from this fact. The incidence of disease and days on which the nurseries were closed for new admissions are set out in the table below :—

Nursery.	Total Days Open.	Total Days Closed for Admission.	Total Number of Cases.						
			Scarlet Fever.	Diphtheria.	Measles.	German Measles.	Whooping Cough.	Mumps.	Chicken Pox.
Avondale Road ...	299	64	—	—	18	—	4	—	—
Park Road	283	22	—	—	27	—	—	—	—
Woodthorpe Road ...	288	37	—	—	12	—	—	8	—
Bedfont...	299	51	—	—	15	—	1	14	—
Central Feltham ...	299	63	—	—	17	—	—	10	—
Feltham Hill	268	42	—	—	1	—	2	4	—
Bear Road	268	—	—	—	—	—	—	1	—
Mountside	276	51	—	—	9	—	—	9	10
Bourne House	285	82	2	—	17	1	—	8	3
Grange Park	298	96	2	1	18	—	—	1	15
Lannock Road ...	298	—	—	—	—	—	—	2	—
Nestle's Avenue ...	297	47	1	—	21	—	—	4	1
Uxbridge Road ...	292	103	2	—	16	—	—	1	—
Wood End Park ...	296	46	—	—	18	—	—	5	—
Yeading Lane	299	48	—	—	18	—	—	4	—
Oak Farm	297	90	4	—	13	—	—	8	—
South Hillingdon ...	282	17	1	2	—	—	—	—	2
Laleham	243	50	2	—	17	—	—	—	—
Ruislip Gardens ...	138	24	—	—	—	—	1	—	—
Ruislip Manor	296	75	1	1	5	—	1	1	—
South Ruislip	298	74	1	—	17	1	—	—	—
Shepperton	296	65	1	—	24	21	2	12	—
Staines	301	23	—	—	15	—	—	—	—
St. Anne's	298	46	—	1	25	—	—	—	—
Sunbury	292	143	—	—	16	—	11	—	—
High Street, Uxbridge	298	166	—	—	29	—	9	—	—
Whitehall	298	148	—	—	9	—	12	—	4
West Drayton	259	59	3	—	17	—	—	1	—
Yiewsley	289	31	1	—	12	1	—	—	—
Totals ...	8,230	—	21	5	406	24	43	93	35
Total number of days closed for admission	—	1,763	137	31	1,083	—	533	—	—

Average number of days closed for admission ...63 (for nurseries open for the whole year).

During 1945, new admissions were received although cases of German measles, mumps and chicken-pox may have occurred in the nursery ; in this way the number of days on which nurseries were closed to new admissions was reduced without any appreciable increase in the incidence of these three diseases.

During 1945 the training of nursery nurses continued to be undertaken in the nurseries, and 18 candidates obtained certificates awarded by the County Council and 23 obtained the certificate of the National Society of Children's Nurseries.

INFECTIOUS DISEASES.

The following table sets out figures showing the incidence of notifiable infectious diseases in Middlesex during 1945 :—

Disease.	Cases notified.	Case-rate per 1,000 population.	Fatal cases.	Case-mortality rate per cent.	Death-rate per 1,000 population.
Smallpox	—	—	—	—	—
Scarlet fever	3,050	1·56	3	0·10	0·002
Diphtheria	331	0·17	19	5·74	0·01
Dysentery	697	0·36	—	—	—
Enteric fever	7	0·004	—	—	—
Erysipelas	420	0·21	—	—	—
Cerebro-spinal fever	86	0·04	26	30·2	0·01
Encephalitis lethargica, acute	2	0·001	—	—	—
Poliomyelitis, acute	61	0·03	5		
Polioencephalitis, acute	2	0·001			
Measles	22,205	11·34	28	0·13	0·01
Whooping cough	2,799	1·43	14	0·50	0·007
†Pneumonia (acute)	1,518	0·78	—	—	—
† ,, (all forms)	—	—	1,092	—	0·56
Puerperal pyrexia	491	‡14·7	9	1·83	§0·27
Ophthalmia neonatorum	181	‡5·42	—	—	—
Malaria	12	0·006	—	—	—

† Case-mortality rate cannot be given, as only cases of acute pneumonia are notified, while the figure for deaths includes all forms of the disease.

‡ Case-rate per 1,000 live births.

§ Death-rate per 1,000 live births.

Smallpox.—No case occurred during 1945.

Scarlet Fever.—There has been a further decrease of 925 cases during the year, and the disease has continued to be mild in type with a case mortality of approximately one per thousand.

Dysentery.—Dysentery of a mild type has continued to occur, and the figure of 697 is the highest yet recorded in any year. There has been no widespread epidemic, and in the majority of cases it has been difficult to trace the source of infection. There is some evidence to suggest that in areas where cases of dysentery have been prevalent, they have been associated with a disquietingly sharp rise in neo-natal mortality from infantile diarrhœa. While this latter has been mainly confined to bottle-fed infants, those on the breast have not been entirely exempt. The problem has been most acute among infants whose birth has taken place in institutions, and here the control of the spread of infection has at times proved a matter of the greatest difficulty.

It is possible that in many cases of the type of dysentery under notice, the primary route of infection is respiratory rather than gastro-intestinal, and the whole question is undoubtedly one of considerable complexity which calls urgently for thorough investigation and research both bacteriological and epidemiological.

Acute Poliomyelitis and Acute Polioencephalitis.—There has been a sharp rise in the incidence of these associated conditions. Of the 61 cases of poliomyelitis notified, 54 occurred in the second half of the year, and there were few grounds for believing that even by the end of the year the peak had been reached.

Measles.—During the war, the characteristic biennial fluctuation in the incidence of measles disappeared, doubtless owing to the extensive evacuation of the child population and its dispersal throughout the country, with a consequential more even distribution of susceptible individuals in the community. During 1945 nearly five times as many cases were notified as in 1944, suggesting the commencement of a return to the pre-war type of incidence curve.

Puerperal Pyrexia.—The cases notified showed a reduction of 50 upon the 1944 figure. The fatal cases showed proportionately a still greater fall, from 13 to 9, which constitutes a new low record for the second successive year.

Diphtheria.—The figures for 1945 show a small increase as compared with the previous year ; 331 cases (case rate 0·17) against 266 (case-rate 0·14), and 19 deaths against 14.

Diphtheria Immunisation.—Estimates of the percentage of the child population in each district which had been immunised by 31st December, 1945, are not yet available, but the table which follows shows the actual numbers immunised, district by district, in each of the years 1944 and 1945, and reveals that in practically every district there was a substantial increase during the second year in the number of children under 5 years of age dealt with, when protection is of chief importance.

Diphtheria Immunisation.

Boroughs and Urban Districts.	1944.				1945.			
	Under 5 Years.		5–15 Years.		Under 5 Years.		5–15 Years.	
	Child Population under 5 years (estimated).	Number immunised.	Child Population 5–15 years (estimated).	Number immunised.	Child Population under 5 years (estimated).	Number immunised.	Child Population 5–15 years (estimated).	Number immunised.
Acton (*Borough*) ...	3,715	449	5,995	111	4,390	914	6,220	155
Brentford and Chiswick (*Borough*)	3,346	352	5,452	114	3,790	564	5,710	124
Ealing (*Borough*) ...	10,440	1,690	21,680	214	11,320	2,661	21,810	458
Edmonton (*Borough*) ...	7,540	872	14,620	258	7,660	1,136	14,340	106
Enfield	8,176	1,133	14,800	405	8,370	1,238	14,660	280
Feltham	3,745	406	7,167	260	3,570	295	7,170	154
Finchley (*Borough*) ...	4,218	498	7,315	295	4,410	774	7,340	94
Friern Barnet	1,779	147	3,157	35	1,780	207	3,110	20
Harrow	14,820	2,116	29,850	239	15,010	2,920	29,320	391
Hayes and Harlington	5,357	793	10,320	239	5,450	797	10,210	326
Hendon (*Borough*) ...	9,194	1,182	18,080	282	9,620	1,969	17,730	614
Heston and Isleworth (*Borough*)	6,347	760	14,470	151	6,650	1,196	13,920	174
Hornsey (*Borough*) ...	5,650	569	8,250	52	6,080	949	8,210	67
Potters Bar	1,206	190	2,107	25	1,200	199	2,100	26
Ruislip-Northwood ...	5,062	418	8,003	34	5,160	594	8,210	31
Southall (*Borough*) ...	3,538	489	7,657	164	3,570	761	7,490	161
Southgate (*Borough*) ...	4,074	462	7,144	38	4,170	546	6,890	47
Staines	2,910	224	5,748	220	2,910	707	5,670	316
Sunbury	1,802	244	3,272	31	1,820	298	3,260	38
Tottenham (*Borough*) ...	8,127	1,095	15,740	1,096	8,630	1,415	15,290	147
Twickenham (*Borough*)	6,872	787	12,380	262	7,140	1,370	12,450	178
Uxbridge	3,789	422	7,523	52	3,730	464	7,440	56
Wembley (*Borough*) ...	8,712	1,314	15,080	90	9,010	1,883	14,750	88
Willesden (*Borough*) ...	11,440	1,193	17,740	338	12,460	1,983	18,430	493
Wood Green (*Borough*)	3,213	358	5,579	158	3,310	522	5,440	158
Yiewsley and West Drayton	1,528	173	2,971	29	1,510	210	2,920	52
The County	146,600	18,336	272,100	5,192	152,720	26,572	270,090	4,754

As before, the County Council's assistant medical officers continued to assist medical officers of health by conducting immunisation sessions in schools and clinics.

Other Infectious Diseases.—There are no material changes to record as compared with 1944.

No cases of cholera, plague, typhus, relapsing fever or anthrax occurred.

Public Vaccination.

The results of the operation of the Vaccination Acts in Middlesex may be summarised as follows :—

——	1940.	1941.	1942.	1943.	1944.
Births registered	25,287*	21,523*	28,238*	29,417*	28,733*
Infants successfully vaccinated	8,576	8,537	13,105	13,786	13,522
Infants insusceptible to vaccination ...	109	126	182	150	101
Infants who had had smallpox	1	1	—	—	—
Statutory declarations of conscientious objection	7,854	6,328	7,775	8,033	6,706
Infants died unvaccinated	943	842	1,029	1,014	920
Vaccination postponed by medical certificates	325	310	259	361	332
Removals to other districts	2,935	2,321	2,636	2,761	3,614
Removals to places unknown, &c. ...	2,512	1,806	1,587	1,588	1,487
Otherwise unaccounted for	2,032	1,252	1,665	1,724	2,051

* This figure does not include re-registered births or cases of children born in other districts.

Of 28,733 infants whose births were registered in Middlesex during 1944, 920 died unvaccinated. Of the remainder, 13,623 (49·0 per cent.) were successfully vaccinated, or were certified to be insusceptible to vaccination. Statutory declarations of conscientious objection were made in respect of 6,706 (24·1 per cent.), whilst 7,484 infants were not vaccinated for various other reasons (postponement on medical certificate, removal, &c.).

TUBERCULOSIS.

The number of new cases of tuberculosis in the County during 1945 was 3,206. Most of these cases (86·24 per cent.), were brought to the notice of the medical officers of health by notification from general practitioners, tuberculosis officers, &c.; nearly 300 represent persons known to be suffering from tuberculosis who transferred into the County during the year and the remainder were brought to notice through death returns.

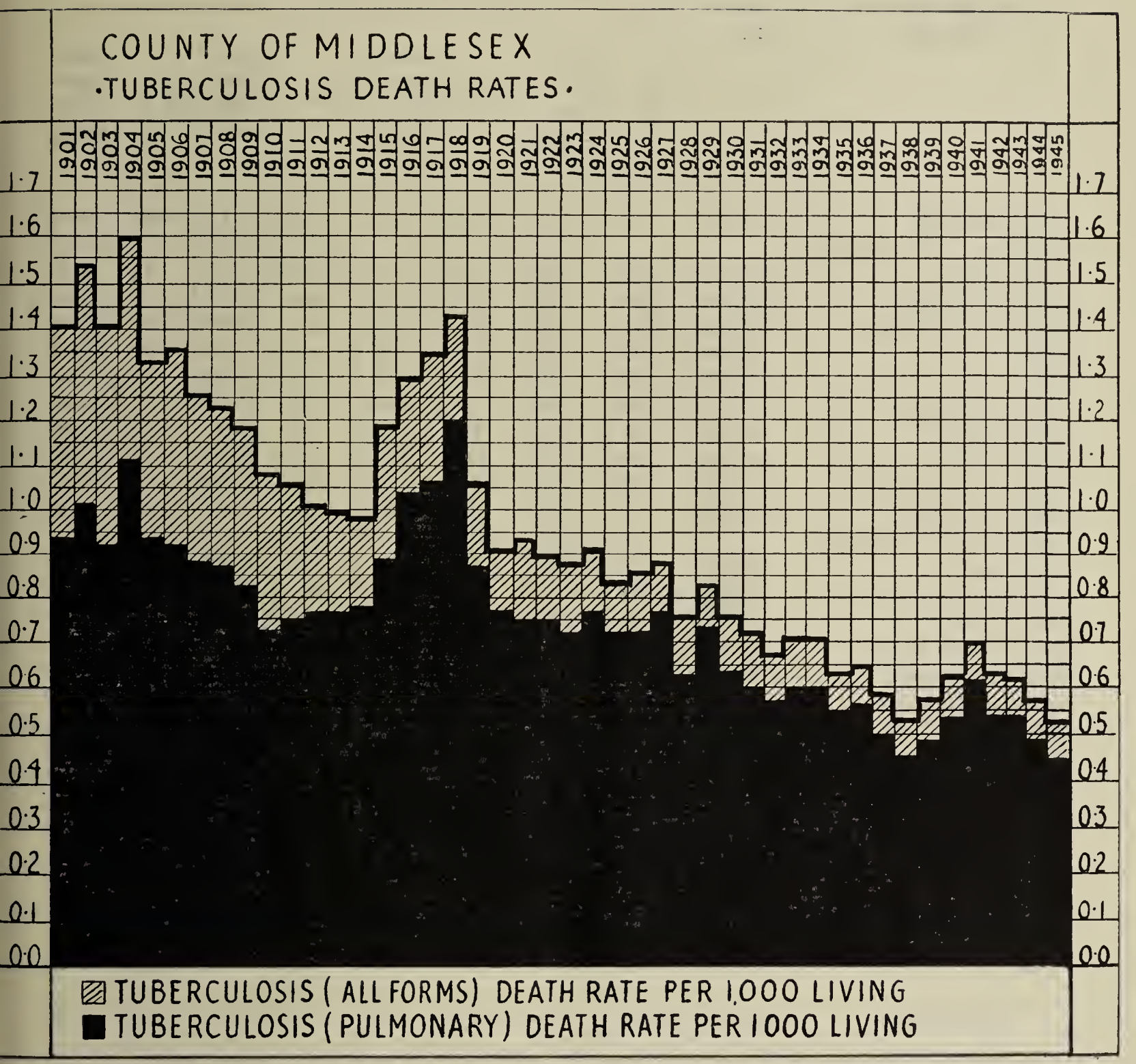
The incidence rate of tuberculosis per 1,000 living, as measured by the number of new cases, was 1·47 for all forms of the disease. For pulmonary tuberculosis only, the rate was 1·28.

The number of deaths from all forms of tuberculosis during 1945 was 1,035, and from pulmonary tuberculosis only, was 900. These figures give death rates per 1,000 living, of 0·53 and 0·46 respectively.

This is the lowest figure ever recorded in Middlesex for death rate for all forms of tuberculosis. The death rate for pulmonary tuberculosis only in 1938 was a fraction lower, being 0·45. The death rate for the whole country for all forms of tuberculosis is 0·619.

The following table shows new cases of, and deaths from, tuberculosis during 1945, divided into age groups :—

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0–1	3	3	3	—	—	1	2	—
1–5	37	31	23	17	2	7	13	11
5–10	35	23	37	20	1	2	5	1
10–15	46	37	19	14	7	1	5	2
15–20	164	195	29	25	14	32	8	5
20–25	207	290	28	35	41	55	3	13
25–35	341	392	38	46	88	88	7	12
35–45	261	174	20	24	104	71	10	8
45–55	214	67	14	10	133	39	5	2
55–65	139	35	5	7	98	26	6	4
65 and upwards ...	62	27	3	6	62	28	5	8
All ages ...	1,509	1,274	219	204	550	350	69	66


COUNTY OF MIDDLESEX
·TUBERCULOSIS DEATH RATES·
1·7
1·6
1·5
1·4
1·3
1·2
1·1
1·0
0·9
0·8
0·7
0·6
0·5
0·4
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0·2
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0·0
1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945
TUBERCULOSIS (ALL FORMS) DEATH RATE PER 1,000 LIVING
TUBERCULOSIS (PULMONARY) DEATH RATE PER 1000 LIVING

NOTIFICATIONS OF, AND DEATHS FROM, TUBERCULOSIS IN EACH DISTRICT, 1945.

Boroughs and Urban Districts.	Population.	Notifications.				Deaths.			
		Pulmonary.		All Forms.		Pulmonary.		All Forms.	
		No.	Rate per 1,000 living.	No.	Rate per 1,000 living.	No.	Rate per 1,000 living.	No.	Rate per 1,000 living.
Acton (*Borough*)	57,200	91	1·59	105	1·84	42	0·73	48	0·84
Brentford and Chiswick (*Borough*)	50,690	74	1·46	84	1·66	29	0·57	32	0·63
Ealing (*Borough*)	160,830	196	1·22	220	1·37	64	0·40	70	0·44
Edmonton (*Borough*) ...	93,530	131	1·40	154	1·65	48	0·51	54	0·58
Enfield	94,690	98	1·03	113	1·19	44	0·46	50	0·53
Feltham	35,670	52	1·46	58	1·63	13	0·36	15	0·42
Finchley (*Borough*) ...	61,370	89	1·45	98	1·60	28	0·46	32	0·52
Friern Barnet	25,750	39	1·51	41	1·59	8	0·31	10	0·39
Harrow	191,710	206	1·07	236	1·23	69	0·36	78	0·41
Hayes and Harlington ...	60,660	102	1·68	116	1·91	28	0·46	33	0·54
Hendon (*Borough*) ...	137,770	167	1·21	197	1·43	57	0·41	64	0·46
Heston and Isleworth (*Borough*)	95,100	119	1·25	143	1·50	43	0·45	52	0·55
Hornsey (*Borough*) ...	78,660	109	1·39	121	1·54	32	0·41	39	0·50
Potters Bar	14,270	10	0·70	18	1·26	6	0·42	7	0·49
Ruislip Northwood ...	56,950	59	1·04	67	1·18	18	0·32	21	0·37
Southall (*Borough*) ...	49,880	75	1·50	88	1·76	24	0·48	31	0·62
Southgate (*Borough*) ...	64,970	58	0·89	67	1·03	27	0·42	32	0·49
Staines	33,500	39	1·16	49	1·46	15	0·45	17	0·51
Sunbury	19,760	23	1·16	27	1·37	7	0·35	7	0·35
Tottenham (*Borough*) ...	110,600	140	1·27	158	1·43	75	0·68	87	0·79
Twickenham (*Borough*) ...	91,920	123	1·34	140	1·52	43	0·47	48	0·52
Uxbridge	45,080	72	1·60	82	1·82	23	0·51	27	0·60
Wembley (*Borough*) ...	117,900	152	1·29	175	1·48	42	0·36	46	0·39
Willesden (*Borough*) ...	148,030	202	1·36	235	1·59	84	0·57	99	0·67
Wood Green (*Borough*) ...	44,940	62	1·38	69	1·54	27	0·60	31	0·69
Yiewsley and West Drayton	16,570	16	0·97	18	1·09	4	0·24	5	0·30
The County ...	1,958,000	2,504	1·28	2,879	1·47	900	0·46	1,035	0·53

It will be apparent what a wide difference in death rates there is between district and district. The area with the highest pulmonary death rate is Acton, which is appreciably higher than the next highest area, namely, Tottenham. Acton has more than double the death rate in each of the areas Wembley, Ruislip-Northwood, Harrow, Sunbury, Friern Barnet and Feltham, and more than treble the death rate in Yiewsley and West Drayton. These variations in mortality and incidence of tuberculosis in the different areas have to be borne in mind in equipping and staffing the chest clinics. It is not correct to plan a service solely on the basis of population. One needs also to ask what are the trends in the various districts. In which district is the anti-tuberculosis campaign proving successful, and where is it apparently hanging fire? The relatively high number of staff at Ealing Chest Clinic (which includes the Acton area) is justified in the light of the death rate and incidence in the population with which the clinic deals.

Leaving out the four years 1939–1942, because the death rates during these years were affected by special war-time conditions, the trend of death rates over the last ten years can be seen to some extent by studying the following table :—

TUBERCULOSIS (ALL FORMS).

Death Rate per 1,000 *living from* 1936–1945, *excluding* 1939, 1940, 1941 *and* 1942.

Boroughs and Urban Districts.	Population, 1945.	Death Rate per 1,000 Living.					
		1936.	1937.	1938.	1943.	1944.	1945.
Acton (*Borough*)	57,200	0·80	0·55	0·58	0·90	0·67	0·84
Brentford and Chiswick (*Borough*)	50,690	0·85	0·63	0·67	0·74	0·69	0·63
Ealing (*Borough*)	160,830	0·61	0·56	0·67	0·64	0·46	0·44
Edmonton (*Borough*)	93,530	0·70	0·90	0·52	0·75	0·70	0·58
Enfield	94,690	0·78	0·69	0·52	0·61	0·64	0·53
Feltham	35,670	0·79	0·49	0·39	0·56	0·76	0·42
Finchley (*Borough*)	61,370	0·44	0·37	0·40	0·56	0·46	0·52
Friern Barnet	25,750	0·55	0·60	0·22	0·44	0·63	0·39
Harrow	191,710	0·54	0·51	0·46	0·52	0·52	0·41
Hayes and Harlington ...	60,660	0·65	0·63	0·73	0·51	0·60	0·54
Hendon (*Borough*)	137,770	0·50	0·47	0·48	0·61	0·61	0·46
Heston and Isleworth (*Borough*)	95,100	0·64	0·53	0·57	0·52	0·47	0·55
Hornsey (*Borough*)	78,660	0·66	0·56	0·53	0·79	0·54	0·50
Potters Bar	14,270	0·49	0·54	0·33	0·28	0·70	0·49
Ruislip-Northwood	56,950	0·40	0·52	0·44	0·44	0·36	0·37
Southall (*Borough*)	49,880	0·71	0·66	0·63	0·80	0·40	0·62
Southgate (*Borough*)	64,970	0·58	0·42	0·35	0·56	0·43	0·49
Staines	33,500	0·37	0·31	0·50	0·49	0·26	0·51
Sunbury	19,760	0·53	0·50	0·84	0·45	0·35	0·35
Tottenham (*Borough*)	110,600	0·86	0·72	0·71	0·87	0·69	0·79
Twickenham (*Borough*) ...	91,920	0·71	0·65	0·51	0·51	0·54	0·52
Uxbridge	45,080	0·55	0·52	0·40	0·44	0·37	0·60
Wembley (*Borough*)	117,900	0·44	0·51	0·41	0·55	0·56	0·39
Willesden (*Borough*)	148,030	0·69	0·70	0·63	0·69	0·71	0·67
Wood Green (*Borough*) ...	44,940	0·95	0·49	0·53	0·56	0·54	0·69
Yiewsley and West Drayton ...	16,570	0·79	0·71	0·45	0·36	0·36	0·30
The County	1,958,000	0·65	0·58	0·54	0·61	0·56	0·53

Careful attention needs to be given to these trends in varying death rates in the County in deciding where to concentrate the Council's anti-tuberculosis forces, particularly in planning the areas in which the mass X-ray unit should work.

Chest Clinics.

Below are set out certain facts relative to the respective chest clinic areas :—

Area : Approximate Population 1945 :	Edmonton, 188,220.		Finchley, 245,020.		Willesden, 265,930.		Ealing, 218,030.		Hounslow, 326,640.		Uxbridge, 229,140.		Tottenham, 155,540.		Redhill, 329,480.		Total. 1,958,000.		Grand Total.
	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	Pulm.	Non-Pulm.	
Number of new cases diagnosed during the year	177	24	276	32	290	34	268	27	412	58	310	42	175	21	392	60	2,300	298	2,598
Number of cases written off during the year as :—																			
(*a*) Recovered	40	27	49	11	32	14	14	5	65	22	14	17	30	20	68	43	312	159	471
(*b*) Died	68	7	80	7	106	4	83	3	132	4	90	5	66	4	117	4	742	38	780
(*c*) Lost sight of or refused to attend, &c.	40	17	38	4	48	17	17	3	65	16	13	3	27	4	57	11	305	75	380
Number of definite cases on the clinic register at the end of the year ...	914	158	1,315	196	1,260	154	1,420	222	1,854	311	1,288	221	819	119	2,123	286	10,993	1,667	12,660

Areas.	Districts Served.	Tuberculosis Medical Officers.	Clinic Addresses.
1	Edmonton, Enfield	Dr. V. Feldman	279, Fore Street, Edmonton.
2	Finchley, Friern Barnet, Hornsey, Southgate	Dr. N. Macdonald ...	655, High Road, North Finchley.
2CH	Potters Bar	Dr. F. A. H. Simmonds	Clare Hall County Hospital, South Mimms, Barnet.
3	Wembley, Willesden	Dr. O. Bruce	Pound Lane, Willesden.
4	Acton, Ealing	Dr. B. C. Thompson ... (Asst., Dr. Pointon-Dick)	Green Man Passage, Uxbridge Road, West Ealing.
5	Brentford and Chiswick, Feltham, Heston and Isleworth, Staines, Sunbury, Twickenham	Dr. R. Heller (Acting) ...	28, Bell Road, Hounslow.
6	Hayes and Harlington, Ruislip-Northwood, Southall, Uxbridge, Yiewsley and West Drayton	Dr. J. T. N. Roe ...	Local County Offices, 259, High Street, Uxbridge.
7	Tottenham, Wood Green ...	Dr. S. T. Davies	140, West Green Road, Tottenham.
8	Harrow, Hendon	Dr. A. S. Hall ... ... (Asst. Dr. H. Rees)	Redhill Hospital Chest Clinic, Edgware. 53, Greenhill Crescent, Harrow (Sub-Clinic).

The staff at the chest clinics has continued to expand, and valuable progress has been made in levelling up the service. A notable step has been the provision of new premises for the Tottenham Area at the Council Offices (the old Grammar School). At the close of the year alterations were in progress and a full X-ray set was being installed. Geographically, the site is excellent, and the Council will at last have an up-to-date clinic adequately equipped, for this densely populated area, where the tuberculosis death rate is the second highest of any area in the county.

After much delay, perhaps inevitable in these times, the extension of the Harrow subsidiary chest clinic by the erection of a hut was completed at the beginning of October. At this clinic there is now modern equipment with a full X-ray set and artificial pneumothorax refill sessions are in operation.

At the Willesden Chest Clinic Dr. Mary Tate was appointed as half-time assistant tuberculosis officer, and with her help, refill sessions have also been organised there.

A valuable addition to the chest clinic service has been the appointment of Miss H. M. Tharp as occupational therapist, who commenced duty in October, 1945. Besides relieving the tedium of illness, occupational therapy does much towards bridging the gap between convalescence and the return to normal working conditions. A certain amount of occupational therapy had been introduced by the welfare officers, and on appointment Miss Tharp visited every clinic and made a report on the activities already in existence. Owing to the time taken in travelling all over the County, she found it impossible to visit all clinics regularly, and therefore decided in the first place to pay fortnightly visits to six of the clinics to advise patients and give demonstration talks on certain crafts. In addition she visited certain patients in their own homes.

Institutional Accommodation.

In March, 1945, the County Council opened a new institution for men suffering from pulmonary tuberculosis at Grim's Dyke, Harrow. The primary object here is to fit men who have been through the stages of active treatment in sanatorium, for a return to full working life. It is designed, in fact, as a rehabilitation centre for tuberculous men.

The building is a lovely one, formerly the home of Sir W. S. Gilbert, and the music room which must have witnessed the origins of many a Gilbert and Sullivan opera is now the men's recreation room. There are extensive grounds, very beautifully set out and with the large kitchen garden and outbuildings there are ample facilities for providing gardening, carpentering and similar occupations in varying grades suitable to the patients' powers.

At the end of the year the following beds were provided for treatable and convalescent cases of pulmonary tuberculosis :—

Institutions.	Beds Provided.				Number of these not Available owing to Shortage of Staff.		
	M.	F.	Ch.	Total.	M.	F.	Total.
Harefield County Hospital ...	184	184	66	434	53	53	106
Harefield County Hospital (Observation)	4	4	10	18	—	—	—
Clare Hall County Hospital ...	242	230	34	506	93	28	121
Clare Hall County Hospital (Hospital block)	26	28	—	54	—	—	—
Danesbury Manor, Welwyn ...	—	60	—	60	—	17	17
Grim's Dyke (opened March, 1945)	50	—	—	50	—	—	—
Other Institutions	142	98	8	248	—	—	—
	648	604	118	1,370	146	98	244

At the end of 1945, the beds reserved in the County Council's general hospitals for patients suffering from pulmonary tuberculosis (mostly advanced cases) were as follows :—

Name of Institution.	Number of Beds Provided.			Number of these Beds Temporarily not Available.		
	Adults.		Children.	Adults.		Children.
	M.	F.		M.	F.	
Ashford County Hospital	28	28	—	—	—	—
Central Middlesex County Hospital ...	35	25	—	—	—	—
Chase Farm Hospital	18	18	—	—	—	—
North Middlesex County Hospital	30	32	—	24†	24†	—
Redhill County Hospital	44	40	—	22*	12*	—
West Middlesex County Hospital	45	43	—	24*	—	—
	200	186	—	70	36	—

* Shortage of nursing staff.
† Owing to enemy action.

It is regrettable to have to report that there has been no improvement in the staffing difficulties at the County Council's institutions. On the contrary, the position has deteriorated.

Mass Radiography Unit.

During 1945, 49,360 persons were examined, 2,000 more than in 1944. The unit worked at seven large factories, all of which acted as centres for other groups in the locality. The lifting of security regulations made this possible. The biggest survey was at the Gramophone Company, Hayes, which is itself the largest factory in the County, with over 12,000 employees. The response here was 80 per cent. During the year the mobile generator was used for the first time with complete success.

This year for the first time sessions were started for the general public as distinct from groups of factory workers. This was made possible on the first occasion by the kind co-operation of the London Passenger Transport Board, who allowed the unit to use their premises at Acton after their own workers had been examined. Approximately £9 was spent locally in publicising the sessions by means of posters, advertisements, &c ; 604 women and 302 men availed themselves of the opportunity to be X-rayed. The number attending increased markedly on the second day over the first, and on the third day over the second day—at one time during the last day 300 women were X-rayed in two hours. Of the 51 persons asked to return for a large film, every one kept the appointment. Other public sessions have been held elsewhere and are becoming a regular feature of the unit's work.

The War Years.

As peace returned during this year it is a proper time to review the chief changes that have occurred in the service during the war years. In the first place one should note that tuberculosis as a disease proved a far less serious menace in the population than appeared likely after the first two years. During the early phase of the war deaths from pulmonary tuberculosis mounted rapidly so that by 1941 there was a 20 per cent. increase in the death-rate. Fortunately this increase did not continue as might have been expected from the experience of the first world war, and as is evident from the diagram published on a previous page. The vital statistics of the disease at the end of the war were almost identical with those at the beginning.

In spite of the very great difficulties connected with staffing, buildings and equipment, the Council has been able to expand its anti-tuberculosis service very considerably during this period. The number of beds now occupied by patients is greater than the number occupied at the beginning of the war. At the end of 1939 there were 1,239 patients under institutional treatment and at the end of 1945 the figure was 1,555. These figures are not a true reflection, however, of the beds available. The County Council has, in fact, some 302 more beds available but they cannot be put into use on account of shortage of staff. The position was materially better half-way through the war, for at the end of June, 1943, there was a peak of just over 1,900 beds occupied. In connection with the use of beds a further disquieting feature is that the average stay of patients in institutions is now very much longer than it was at the beginning of the war. The figures for the past four years at Clare Hall are :—

	For patients who were discharged. *Days.*	*For patients who died.* *Days.*
1942	186	268
1943	180	234
1944	202	168
1945	255	331

The big increase in 1945 in the stay of patients is to be explained probably by the advent of the new form of treatment known as pneumoperitoneum.

On the chest clinic side, in addition to the expansion which occurred in 1945, there has been a very substantial increase in staff, and improvements in building and equipment. In 1942 the subsidiary chest clinic at Uxbridge became a main chest clinic in the charge of Dr. J. T. N. Roe, covering the Borough of Southall, the Urban Districts of Hayes and Harlington, Yiewsley and West Drayton, and Uxbridge. By the evacuation of caretakers, considerable extra space has been made available at Ealing, Willesden, Edmonton and Hounslow. At Hounslow, in addition, the chronic sick who formerly occupied part of the building were transferred to West Middlesex County Hospital. In 1943 a mass X-ray unit started work in the County.

The additional recruits to the chest clinic staffs have been in the ranks of medical auxiliaries more than medical men. Without any doubt a big strain has been put on the tuberculosis officers during these war years. This strain should be relieved by further medical man power, which was unobtainable during the war owing to the demands of the Central Medical War Committee. It is now agreed in principle that each tuberculosis officer shall have, as soon as accommodation is available, an assistant tuberculosis officer to work with him.

One of the greatest advantages which have befallen tuberculosis patients in these years is the institution of the Government's scheme of financial allowances to many patients. These came into operation in 1943 and provided the main reason for the establishment of welfare officers in the chest clinics.

The scope of the work undertaken by the welfare officers continues to develop and their monthly meetings usually have a full agenda. Matters which they have considered include annual statistics and record keeping, hospital car service, payment of home helps, difficulties relating to the boarding-out of children, the impact of family allowances, disabled persons register, conditions for the issue of free milk, liaison with other members of the clinic staffs, &c.

During the year 1945 the welfare officers dealt with 5,986 different cases. Maintenance allowances were paid to 2,450, and in 1,200 cases these allowances were supplemented by an extra nourishment grant. Clothing was supplied in 571, bedding in 378, home helps in 476 instances, and approximately 240 children were boarded out.

Five hundred and twenty patients returned to full-time work in 1945. In 54 cases arrangements were made by the welfare officers for the patient to receive some sort of training course. Other activities of welfare officers were concerned with claims for pensions, holidays for the patients and their families, help with debts, fares and moving expenses, arrangements for the provision of medical accessories, applications for supplementary clothing coupons, priority dockets for bedding and furniture and extra fuel, arrangements for transport to and from clinics. Close contact is maintained with the relieving officers, who alone can grant financial assistance to those patients in need of a regular income but not eligible for a maintenance allowance.

With the bed position likely to worsen rather than improve, many relatively advanced cases, some of them living under slum conditions, are not getting and cannot expect to get an institutional bed. It may be necessary, therefore, in the future still further to increase the chest clinic staff as it becomes more imperative to find alternative methods of caring for the tuberculous patient other than by institutional treatment.

Reviewing the service as a whole, there are more staff, better equipment in the chest clinics which, together with the mass X-ray unit, provide increased facilities for the diagnosis of the disease.

On the institutional side there are splendid facilities for the active treatment, convalescence and rehabilitation of patients, although the number of beds available is far short of the needs of the county.

With regard to domiciliary treatment and care, in addition to the Government grants paid under Ministry of Health memorandum 266/T, the Council now spends a considerable amount each year in providing extra nourishment, clothing, bedding, home helps and boarding-out allowances for patients and their families.

Taking all these factors into consideration, the Council may feel assured that a great deal more is now being done for the welfare of tuberculous patients than formerly.

Review of the Council's Tuberculosis Scheme.

In July the County Council received and adopted a special report which surveyed and subjected to a critical analysis the whole of the work of the Council's anti-tuberculosis service, and put forward a number of recommendations for its improvement. The report and the field work on which it is based was mainly the work of Dr. T. O. Garland. In view of the importance of the subject, the report is reproduced in full.

Introduction.

1. The report of the Departmental Committee on Tuberculosis in 1912 laid down that any scheme which was " to form the basis of an attempt to deal with the problem of tuberculosis should provide :—

That it should be available to the whole community.

That those means proved to be most effective should be adopted for the *prevention* of the disease.

That a definite organisation should exist for the detection of the disease at the earliest possible moment.

That, within practical limits, the best methods of *treatment* should be available for all those suffering from the disease.

That concurrently with the above, provisions should be made for increasing knowledge of the disease, its detection and cure by way of research."

It would be hard to better this conception formulated over thirty years ago.

2. In the report which follows, the subject is considered under three sections :—

(1) A review of the incidence of and mortality from tuberculosis in the County, and the problems raised thereby.

(2) A criticial review of the Council's existing scheme for dealing with tuberculosis.

(3) Proposals for improving the service.

The Incidence of and Mortality from Tuberculosis in Middlesex, and the Problems arising therefrom.

3. The Registrar-General's estimate of the population of Middlesex in June, 1943, was 1,948,000. The following table gives information as to the number of tuberculous persons whose names were on the chest clinic registers at the end of 1943, the number of new cases diagnosed during the year and the number considered to have recovered during the year, and the number who died from the disease :—

	Pulmonary.				Non-Pulmonary.				Total.				Grand Total.
	Adults.		Children.		Adults.		Children.		Adults.		Children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Tb. cases on chest clinic registers at end of 1943 ...	4,622	3,783	388	338	432	529	311	293	5,054	4,312	699	631	10,696
Number diagnosed as Tb. in the year	1,166	1,007	109	109	85	132	61	54	1,241	1,139	170	163	2,713
Number written off as recovered ...	116	125	23	18	34	44	29	14	150	169	52	32	403
Number died from Tb.	512	332	8	12	12	24	1	2	524	356	9	14	903

4. Tuberculosis is a disease very difficult to detect in its early stages, except by X-rays. It is often only amenable to prolonged treatment involving long bed rest combined with surgical procedures. Up to the present the disease carries a high death rate, as will be seen by comparing in the table above the numbers of those who died with those who recovered. The incidence of the disease, moreover, falls most heavily upon the young adult; thus in 1942, pulmonary tuberculosis alone in Middlesex accounted for 717 deaths between the ages of 15 and 45, the most productive span of life. This death rate is approximately equivalent to the combined death rates for all cancers (284); heart diseases (236); bronchitis, pneumonia and all other respiratory diseases (213), for the same age group.

5. It may be convenient to classify the problems arising from the incidence of and mortality from tuberculosis as follows :—

A.—The Tuberculous Case.

1. Diagnosis in early stage of the disease.
2. Institutional treatment for the case likely to recover.
   - (*a*) Accurate assessment.
   - (*b*) Skilled intervention.
   - (*c*) Working back to health.
3. Accommodation and supervision for the case that neither recovers nor dies quickly—the chronic case.
4. Comfort and nursing for the dying.

B.—The Non-tuberculous.

1. Those at special risk—
   - (*a*) Living in same household with an infected case.
   - (*b*) Working under conditions where there is close contact with active cases; nurses, domestic workers, doctors and students.
   - (*c*) Working under conditions liable to entail lung damage; miners, potters, masons, trimmers, &c.
2. Population at large. Here the problems involve provision of high standards in hygiene, housing, diet, leisure, recreation and periodic medical examination.

C.—Provision for Increasing Knowledge of the Disease.

1. Research of a clinical character—investigating possibilities of developing immunity in the population; searching for new drugs; perfecting surgical technique, &c.
2. Research of a social character—why some families show a high and others a low resistance; the relation between housing and infection; the relation between household income and recovery rate, &c.

A Critical Review of the Council's existing Scheme for dealing with Tuberculosis.

6. Before embarking upon a consideration of the Council's present scheme, the Committee may like to be reminded of the legal provisions dealing with the treatment of tuberculosis contained in the Public Health Act, 1936 :—

Section 171 places the duty upon the Council " to make adequate arrangements for the treatment of persons who are suffering from tuberculosis, at or in dispensaries, sanatoria, and other institutions approved by the Minister."

Section 172 gives power, upon the order of a Court of Summary Jurisdiction, to remove a person suffering from tuberculosis, who is infectious to others, to hospital or other institution, and detain him there for three months, with certain safeguards and provisos about costs, &c. In practice this section is very seldom used.

Section 173 (i) " Without prejudice to the foregoing provisions of this Part of the Act, with respect to institutional treatment, a County Council may make such arrangements as they think desirable for the treatment of tuberculosis."

Section 173 (ii) " The Council may make such arrangements as they think desirable for the after-care of persons who have suffered from tuberculosis." Section 173 thus gives very wide powers to the County Council.

Section 174 deals with the expenses of the County Council in connection with tuberculosis.

Section 175 contains special provisions with respect to treatment of tuberculous seamen; which in practice does not apply to Middlesex.

7. These five sections of the Public Health Act are the only ones referring specifically to tuberculosis though there are other sections of the Act referring generally to such matters as notification of infectious disease, the prevention of infection, power to contribute to voluntary associations (including voluntary hospitals and district nursing associations), which can, in certain instances, be applied to tuberculosis.

It must be borne in mind that the statutory provisions quoted may well undergo substantial modification in the light of the White Paper on a National Health Service.

Chest Clinics.

8. The success of a scheme for combating tuberculosis depends in a great measure upon the efficiency of the chest clinic service. It is here that the Council's tuberculosis service will largely be judged by the population it is designed to serve. Not only should the clinic be a comfortable and attractive place in which to receive patients, but it should be developed to the highest degree of efficiency in respect of staff and equipment. Without proper facilities for diagnosis, out-patient treatment and preventive work, the best efforts of the authority in connection with institutional provision are likely to be relatively unavailing in the major problem of reducing and ultimately eradicating tuberculosis.

9. The functions with which the clinics are principally concerned to-day are :—

(*a*) *To diagnose and supervise the tuberculous case.*

To an increasing degree this entails the examination of many people who prove to be non-tuberculous. Thus in 1936 at the Hounslow Chest Clinic, of 459 new patients examined (excluding contacts and transfers) 260, or 57 per cent., proved to be tuberculous. In 1943, of 2,150 new patients examined (excluding contacts and transfers) 427, or only 20 per cent., proved to be tuberculous.

(*b*) *To prevent tuberculosis or to diagnose the disease in an early stage in a household contact of known cases.*

Much of this preventive work is of an educative character, and falls largely upon the tuberculosis visitors.

(*c*) *To continue the treatment of cases that have been to an institution.*

To an increasing extent out-patient treatment in the clinics consists of artificial pneumothorax and pneumoperitoneum refills.

(*d*) *To keep under supervision all cases on the register, whether receiving active treatment or not.*

Cases should remain under supervision until they die or until they have been quiescent for a period of five years.

(*e*) *To carry out such welfare work as is possible.*

When the County Council adopted the Government Tuberculosis Allowances Scheme in October, 1943, the staffs in the chest clinics were augmented by the appointment of a welfare officer and a clerk in each area. In addition to the arrangements made for payment of allowances, the County Council has now authorised in necessitous cases the payment of home helps, payment for boarding out children of tuberculous parents, extra nourishment, extra clothing and bedding for patients and their dependants. The welfare officers, half of whom are trained almoners, have found in practice that they are also able to mobilize assistance of one kind and another from a number of voluntary organisations. The material help being given, therefore, under the above heading, is now considerable and far beyond anything given in the past in Middlesex.

By the end of 1943 there were 853 persons in the County in receipt of allowances under the Government Scheme, involving a weekly aggregate sum of £2,580 ; by the end of June, 1944, there were 1,098 persons being paid an aggregate weekly sum of £3,415.

The piecemeal character of the Government's tuberculosis allowances, however, differentiating for instance between an earning married man and an earning married woman, between a case of tuberculosis of the lungs and tuberculous disease of the spine, between a case likely to get well in eighteen months and one not likely to get well, makes not only for complicated administration, but is liable to create a sense of injustice and cause unhappiness and depression.

The Government scheme was admittedly a stopgap measure, made under the Defence Regulations in connection with the utilization of man power. There can be little doubt, however, that public opinion will require the continuance of allowances to the tuberculous after the war in connection with health or social legislation.

10. Responsibility for the efficient working of the chest clinic as a whole falls upon the tuberculosis officer.

11. For chest clinic purposes the County has been divided into eight administrative areas. Particulars of these, and information regarding the population served and details of the building, equipment and staff of each chest clinic, are set out in the following table :—

Number and Area.	Population in June, 1943.	Building and Equipment.	Staff.
1. Edmonton, Enfield ...	188,000	Housed in old semi-detached building. No X-ray plant, Very cramped. Capable of modernisation on a temporary basis if caretaker housed elsewhere	Tb. officer, 3 nurses, 2 clerks, welfare officer, welfare officer's clerk, caretaker and wife as part-time cleaner.
1A. Tottenham, Wood Green...	155,500	Housed in old, semi-detached building, totally unsuitable. No electricity supply. No X-ray plant	Tb. officer, 2 nurses, 1 clerk, welfare officer, welfare officer's clerk, cleaner.
2. Finchley, Friern Barnet, Hornsey, Southgate	225,419	Housed in old, semi-detached building. No X-ray plant. Negotiations are in process for an alternative building	Tb. officer, 3 nurses, 2 clerks, welfare officer, assistant welfare officer, welfare officer's clerk, resident caretaker and wife as part-time cleaner.
2A. Harrow, Hendon, part of Wembley	388,310	Housed as a separate unit at Redhill County Hospital. Equipped with a screening set, permanent X-rays being taken on the hospital main set. Work severely handicapped by cramped accommodation. There is also a subsidiary chest clinic in this area situated at Harrow, which has recently been enlarged by the addition of a hut and will shortly be much better equipped	Tb. officer, assistant T.O., 4 nurses, 3 clerks, welfare officer, assistant welfare officer, welfare officer's clerk, cleaners.
3. Willesden, remainder of Wembley	199,000	Housed in separate building planned as a clinic. Design recently improved and extra accommodation obtained by housing caretaker elsewhere. Equipped with an X-ray plant	Tb. officer, 3 nurses, 1 clerk, welfare officer, welfare officer's clerk, radiographer, non-resident caretaker and wife as part-time cleaner.
4. Ealing, Acton	215,775	Housed in a separate building planned as a clinic. Design recently improved and extra accommodation obtained through housing caretaker elsewhere. Equipped with an X-ray plant	Tb. officer, assistant T.O. (half-time), 4 nurses, 2 clerks, welfare officer, welfare officer's clerk, radiographer, cleaners.
5. Heston and Isleworth, Brentford and Chiswick, Feltham, Twickenham, Sunbury, Staines	328,053	Housed in a large detached building. The only clinic where space can be said to be adequate. X-ray plant and generally more fully equipped than any other clinic	Tb. officer, assistant T.O. (full-time), 4 nurses, 4 clerks, welfare officer, assistant welfare officer, 2 welfare officer's clerks, radiographer, dark room assistant, non-resident caretaker and cleaners.
6. Uxbridge, Southall, Ruislip-Northwood, Hayes and Harlington, Yiewsley and West Drayton	233,137	Housed in the local County Council offices at Uxbridge. Equipped with X-ray plant but accommodation cramped	Tb. officer, 4 nurses, 2 clerks, welfare officer, welfare officer's clerk, radiographer, cleaners.

12. It will be seen at once that the areas vary greatly as regards size and population, and in standard of premises, staffing and equipment of the different clinics. The next table sets out some of these differences in statistical form. Analysis of some of the figures furnishes an indication of the manner in which an anti-tuberculosis service may be handicapped by bad premises, and, even more, by lack of modern equipment. In this respect the figures showing the number of new cases per annual death are probably particularly significant.

COMPARATIVE STATISTICS OF CHEST CLINIC AREAS, 1942.

	1	1A	2	2A	3	4	5	6	Total.
1. Population of area (1,000's)	187	154	227	371	197	213	328	234	1,911
2. Deaths from P.T. during 1942*	113	113	130	233	124	122	165	90	1,090
3. Deaths per 100,000 of population†	60 (69)	73 (80)	57 (65)	63 (67)	62 (70)	60 (64)	51 (53)	39 (45)	54·5 (64·3)
4. Total adults on register 30.9.42	793	683	962	1,695	852	969	1,378	755	8,087
5. Adults on register per 1,000 of population ...	4·2	4·4	4·2	4·6	4·3	4·5	4·2	3·2	4·0
6. New cases diagnosed (1.4.42–3.12.42)—									
Adults	132	110	172	358	178	211	305	151	1,618
Children	12	5	16	37	10	15	37	10	142
Total	144	115	188	395	188	226	342	161	1,760
7. Proportion of children to adults	0·91	0·46	0·92	1·03	0·56	0·71	1·21	0·66	0·84
8. Number of new cases per annual death ...	1·3	1·0	1·5	1·7	1·6	1·9	2·1	1·8	1·6
9. P.T. admissions to sanatoria (1.4.42–14.4.43)...	118	92	146	281	177	164	297	128	1,403
Adults—									
Intra County ; Extra County ...	70 39	27 62	83 54	132 118	129 42	118 39	216 56	60 60	835 470
Children	6 3	2 1	9 0	18 13	4 2	7 0	24 1	6 2	76 22
10. Sanatorium admissions per 100 cases diagnosed–									
Adults	92	81	80	69	96	74	90	80	—
Children	75	60	56	84	60	47	65	80	—
11. Number of sanatorium admissions per annual death	1·0	0·8	1·1	1·2	1·4	1·3	1·8	1·4	1·3

* From M.O.H. returns ; figures are too low.

† Figures based on above. Figures in brackets equal Registrar-General's Returns.

13. A comparison of the work of Area 1A (Tottenham—poor premises and complete lack of modern equipment) with that of Area 5 (Hounslow—satisfactory building with modern equipment), shows that from the Tottenham area only 27 adults during the year were admitted to sanatoria within the County, as compared with 216 from the Hounslow area. Cases admitted to the County sanatoria are mostly those comparatively early cases who have a reasonable chance of recovery. The inference, therefore, is that in the Tottenham area and, to a somewhat lesser extent, in other areas in the north of the County where premises and equipment are unsatisfactory, cases do not tend to be discovered until the disease is well established and the chance of effective treatment thereby reduced. It is, of course, recognised that this comparison cannot be pressed too far, as the size and character of the two populations served are also dissimilar.

14. Another inference to be drawn from the table is that Areas 2A and 5 are much too large and should be divided.

15. While it would take up too much space to give detailed figures for all the Chest Clinic areas, it may be of interest to furnish for at least one area some amplification of the previous table. In the following table, therefore, are to be found detailed statistics indicating the development ofthe work at Hounslow Chest Clinic. These figures demonstrate the large increase in work that is likely to occur when a clinic is adequately staffed and equipped.

HOUNSLOW CHEST CLINIC.

	1936.	1937.	1938.	1939.	1940.	1941.	1942.	1943.
New patients	635	730	964	1,124	1,941	1,949	2,658	3,175
New patients (excluding contacts and transfers)	459	534	568	692	1,045	1,154	1,656	2,150
Of these, tuberculous	260	274	293	296	443	410	460	427
Percentage diagnosed tuberculous...	57	51	51	42	42	35	28	20
Transfers from other areas ...	51	62	57	38	86	65	90	68
New contacts	123	134	339	394	810	730	912	957
Of these, tuberculous	18	11	19	26	45	55	51	50
Percentage diagnosed tuberculous...	14·4	8·2	5·6	6·6	5·5	7·5	5·5	5·2
Total attendances	1,934	2,189	3,719	4,082	5,932*	6,284*	9,136*	12,164*
Number of refills	—	—	—	—	1,097	1,515	2,302	4,001
Number on register at end of year	691	783	928	1,020	1,117	1,376	1,680	1,914
Under observation at end of year	—	2	30	36	41	70	92	145
Number of visits by nurses (homes)	2,700	2,824	2,985	3,168	4,345	4,890	5,602	5,601
Examinations of sputum ...	71	65	411	473	733	705	579	1,007
X-ray examinations	282	353	1,119	1,307	2,108	2,852	4,193	5,030
Screenings	—	—	—	—	1,086†	2,101	3,919	6,286
Tuberculin tests	—	—	120	327	474	804	1,260	1,191
Sedimentation rate tests ...	—	—	36	221	346	414	378	326
Lipiodol examinations	—	—	18	31	72	71	93	63
Cases written off as dead ...	125	109	110	129	132	138	152	154
Cases written off as recovered ...	31	38	29	29	67	44	50	44
Transfers to other areas, not desiring treatment and lost sight of	122	111	114	126	173	130	118	138
Recommended for institution (not including hospitals)	365	387	453	491	473	475	516	462

* Including refill patients.
† 6 months only.

16. I have on previous occasions indicated the need for adequate X-ray apparatus in every chest clinic. Without an X-ray plant, the single most important diagnostic investigation, namely, an X-ray examination of the chest, cannot be carried out, nor can the clinic do artificial pneumothorax refills. The three clinics in the northern areas, namely, those at Tottenham, Edmonton and Finchley, are without this most essential equipment, and although plants have been put on order for two of these three clinics, installation in the case of Finchley depends upon the acquisition of new premises. Suitable premises have recently been found at Finchley and plans for their adaptation have been submitted to the Ministry of Health for approval. X-ray apparatus will shortly be installed at Edmonton in accommodation recently vacated by the caretaker. For patients attending the northern clinics, the County Council has to pay other institutions to carry out refills and X-rays; the work is by no means always carried out or supervised in the way the Council's own staff would desire; moreover, this method is costly. Thus in the Finchley area, in the first three-quarters of 1943, refills cost £360, and X-ray examinations approximately £800. For the patient, the arrangement entails more journeys and divided control of his case.

Institutional Treatment.

17. The County Council maintains three institutions reserved solely for pulmonary tuberculosis cases. Two of these, Harefield and Clare Hall, are large hospitals, and the third, Danesbury, is reserved for so-called "convalescent" female cases. In addition, certain of the County general hospitals have wards reserved for cases of pulmonary tuberculosis. The accommodation available from these sources at the end of 1943 was as follows :—

Institution.	Male.	Female.	Children.	Total.
Harefield	196	196	76	468
Clare Hall	206	202	32	440
Danesbury	—	60	—	60
Central Middlesex County Hospital	20	14	—	34
North Middlesex County Hospital	30	30	—	60*
Redhill County Hospital	44	40	—	84
Staines County Hospital	28	28	—	56
West Middlesex County Hospital	49	43	—	92
		Grand total		... 1,294

* Since lost by bombing and temporarily replaced at Clare Hall.

18. In addition to beds in their own institutions, the County Council maintains a number of patients elsewhere. In 1939 there were 490 Middlesex cases being maintained thus. At the end of 1942 this figure was 401. On 31st March, 1944, it was 304. While the beds available in the County Council's own institutions have increased in the last three years by nearly five hundred, those available in outside institutions have fallen by nearly two hundred.

Beds for treatable cases.

19. To-day there are virtually only two classes of beds available ; the bed for the treatable case in Clare Hall, Harefield, or an outside sanatorium, and the bed in the general hospitals for the advanced or dying case. (Danesbury, containing 60 female beds filled with convalescent cases from Harefield and Clare Hall, indicates a recognition of the fact that there is a use for another class of bed.) The need for treatment beds so far exceeds the supply that there is a permanent waiting list for admission to sanatoria. On the 5th October, 1944, there were 373 pulmonary cases, classed as amenable to sanatorium treatment, for whom no beds could be found, and for some years now Middlesex cases have waited up to three months (and lately even up to five months) after being diagnosed and recommended for institutional treatment before getting a bed.

Apart from personal distress to the patient, waiting in many instances means greater cost to the Council because the disease extends in the interval, and longer treatment is needed.

Beds for advanced or dying cases.

20. As distinct from cases that are going to get well, many cases die within a comparatively short time of first being seen at the clinics. Two years ago Dr. Lewis Fanning, of the London School of Hygiene, analysed the deaths of 2,215 males and 1,596 females who died from tuberculosis in Middlesex during the years 1937–1941. The object was to find the duration of the disease from the time of the patient's first being seen at the clinic to the date of death. It was found that approximately 43 per cent. of these deaths occurred *in under one year* from the date of notification or date upon which the patient was first seen at the clinic.

21. Bearing in mind this high death rate, the accommodation for the dying case in the county is, if anything, more restricted than accommodation for the treatable case. A proportion of cases who do badly and who should really be moved into the advanced class of beds remain in the sanatoria and block beds there. There were 19 cases waiting for admission to the North Middlesex County Hospital on 20th November, 1943, from sanatoria alone. One had waited since March, 2 since June, 2 since July, 3 since August, 4 since September, 5 since October and 2 since November. Seven of the above were in Clare Hall. The loss of "treatable beds" from this cause is considerable ; thus at Clare Hall in 1942 the case that died occupied a bed on an average for 100 days longer than the case that was discharged.

22. Apart from its effect upon blocking sanatorium beds, however, the shortage of beds for advanced cases imposes great hardship on patients unable to obtain institutional treatment at all. Thus it seems quite unjust to put a dying case of tuberculosis, who is in urgent need of institutional medical and nursing attention, upon a hospital waiting list, while a case showing very likely quite similar symptoms, such as a dying carcinoma of the larynx or lung, will get a bed immediately. Moreover, the advanced case left in a home can be a source of great danger to the rest of the household. To quote just two cases from Area 4 : J. L. waited at home for a hospital bed and subsequently his two brothers and two sisters were admitted to sanatoria for treatment of tuberculosis. A young

man, G. R., waited for admission to a sanatorium and subsequently two of three young relatives of his landlady, living in the same house, developed pulmonary tuberculosis lesions. In both the above instances the patient's parents attributed (rightly or wrongly cannot be proved) the infection of their families to the County Council's delay in removing the infective source from the home.

Accommodation for the chronic case.

23. There are many patients who neither die nor recover, but who live perhaps for years in some degree of invalidism as cases of chronic pulmonary tuberculosis. The Council's scheme at present makes no special provision for this last group of patients. They, too, block beds both in the sanatoria and in hospitals, but many also live at home under conditions favourable to the spread of infection among their families. The chronic patient suffering from pulmonary tuberculosis is probably the chief source of infection in the general population.

Administration.

24. The Council's scheme is administered by the Public Health Committee, which is able to co-ordinate and control all aspects of the intricate problems of this disease dealt with by various Sub-Committees of the Public Health Committee. On account of the ramifications of the subject, nearly every Sub-Committee of the Public Health Committee is concerned. Thus, the Sanatoria Sub-Committee is responsible for the internal administration of Clare Hall, Harefield and Danesbury ; each general hospital Sub-Committee is concerned with the treatment of those advanced and other patients who are admitted to the Council's general hospitals. The chest clinic service, with its tuberculosis officers, welfare workers and nurses ; the mass radiography unit ; and the maintenance of patients in institutions not belonging to the County Council are in the hands of the Relief and General Purposes Sub-Committee. There is thus no sub-committee which is entirely responsible for every aspect of the Council's anti-tuberculosis work, and having regard to its ramifications it is difficult to see how such a sub-committee could be created. At the level of the Public Health Committee, however, co-ordination is complete, and to this Committee from time to time can be presented an entire picture of the position.

25. On the officer level, co-ordination is very complete indeed. Most of the tuberculosis officers are consultant physicians on the staff of the Council's general hospitals and have charge of beds thereat. Regular meetings of the tuberculosis medical staff, *i.e.*, tuberculosis officers and the medical directors and other senior members of the staff of Harefield and Clare Hall, are held monthly under the title of the Middlesex Tuberculosis Association. These meetings are attended by Dr. Garland, and whenever possible myself, in order that problems both clinical and administrative relating to the service may be discussed. This body also, at my request, has appointed a small sub-committee representative of all parts of the service to advise me from time to time on tuberculosis problems. The tuberculosis health visitors and the welfare officers each hold periodical meetings, when matters concerning their work are discussed. These meetings have both a co-ordinative and an educative value, and the minutes are submitted to me.

Miniature Mass Radiography.

26. Since the middle of 1943 the County Council has operated a mass X-ray unit which, when working a full week, examines by X-ray some twelve to fourteen hundred persons. Examinations are being carried out in factories of persons who, in their own estimation, are well. The limited experience so far gained indicates that in every thousand people so examined, ten are found to have a lesion in the lungs requiring further investigation and three or four of these to need treatment for active tuberculosis.

Research and Medical Education.

27. There is no special provision in the County Council's scheme for organised research work on tuberculosis. It is, of course, true that fresh knowledge is always being acquired during the course of routine treatment, and in this connection the County Council may well be proud of the fact that certain individual members of its tuberculosis medical staff have already made important original contributions to the literature of the subject. Little specialized research in tuberculosis is going on in Great Britain, but a two million population unit administered by a progressive local authority affords such an excellent opportunity for research work that special consideration should be given to taking advantage of the situation.

28. During the war, certain members of the medical staff have had an opportunity of teaching undergraduate medical students, to the benefit both of students and of staff.

Proposals for Improving the Service.

29. In general it is fair to say that during the war the Council's service has not only been maintained, it has in a number of directions been expanded, and is now a better equipped and more extensive service than that existing four years ago.

Chest Clinics.

30. It is necessary to see the chest clinic as the base line for the attack upon the problem of tuberculosis, and the tuberculosis officer (or Physician to the Chest Clinic as he might with advantage be termed) the director of this attack. It is through the chest clinic that contact with the main bulk of the population is achieved and whence the study of the disease in all its social content must take place. I am of opinion, and in this I have the support of competent workers in the field of tuberculosis in this country, that a population of 200,000 is the maximum which can be covered by an efficient clinic as we visualise it to-day. Further developments of our knowledge may indicate that even this number is too great, but accepting it as a short-term basis for action, there are required in the county ten chest clinics instead of the existing eight.

31. A new chest clinic at Harrow, the population of which is almost exactly 200,000, sited for the time being on the existing subsidiary clinic for Area 2A, is a relatively easy adaptation to make to provide a ninth chest clinic area. The tenth must have as its object the approximate halving of Area 5. The probability is that it could be sited most conveniently at Staines, and by taking in Feltham, Sunbury and Twickenham, it would cover a population of approximately 180,000. So far as is consistent with the convenience of patients, a clinic in the county should cover a geographical area co-terminous with the established borough and urban district boundaries, so that the county statistics can be used in conjunction with the Registrar-General's returns.

32. The success of the chest clinic established at Redhill County Hospital has convinced me of the desirability of siting future chest clinics within the precincts of County hospitals. The close association of a clinic with the other departments of a general hospital and, in particular, with the tuberculosis beds at the hospital which are under the control of the tuberculosis officer, is in my opinion of great value to the patients and staff. When planning new hospital buildings in Middlesex in the years to come, this consideration should be borne in mind.

Premises.

33. All the existing clinics, with the exception of Hounslow, are too small for present-day needs, but the complete solution of this problem is a matter of long-term policy. It is necessary, however, to obtain new accommodation for the clinics in the northern part of the county, *i.e.*, Edmonton, Tottenham and Finchley, though in the case of the last-named it is hoped the Council's proposals, now before the Ministry of Health, may provide a satisfactory clinic. It is also most desirable, so soon as building becomes possible, to increase the accommodation at Redhill by extending the present clinic either laterally or vertically, or both. At Uxbridge extra rooms are badly needed, and can possibly be made available directly the war ends by the conversion of the gas cleansing unit erected on that site in connection with civil defence.

Equipment.

34. All clinics should be staffed and equipped at a standard allowing for a thoroughly up-to-date service. Each should have a complete X-ray apparatus, with a whole-time radiographer and a dark-room assistant, who besides assisting the radiographer with dark-room work would be responsible for all filing and clerical work in connection with X-rays. In addition, in certain clinics it may be advantageous to install a screening set in addition to the radiographic apparatus. Screening of the chest is a valuable aid to clinical diagnosis, and although it is quite possible to use the existing sets for screening, such a procedure is apt to interfere with the smooth running of a busy session. A screening set would be of particular value in those clincs where two physicians are working together. In this connection arrangements are already in hand to install such a set at Hounslow clinic in addition to the main apparatus. It is recommended therefore that as and when necessary, screening sets should be provided for other chest clinics ; this would entail some capital expenditure, but should also effect some reduction in running costs in that fewer large films would need to be used, and the life of the X-ray tubes should be lengthened.

Medical staff.

35. The efficient filling of the role of physician to the chest clinic demands the possession of qualities of a high order. He should be a man of such standing as will command the respect of the practitioners in his area for his clinical ability as a consulting physician. He thus needs a background of general medicine and should possess one of the higher degrees or diplomas in medicine. Over and above this, he requires to have a specialised knowledge of tuberculosis and chest radiology and must be, in addition, an exponent of social medicine. The County Council is fortunate in having in its tuberculous service a number of tuberculosis officers fulfilling these somewhat exacting conditions, but if these men are to be retained and others of a like calibre to be recruited, consideration will need to be given to the salaries paid. The present scale of salary, namely, £750 × £50 to £1,000, was fixed as long ago as 1925. Since that time, knowledge of the subject has greatly extended, methods of diagnosis and treatment have been much enlarged both in scope and complexity, and the modern conception of the functions of a tuberculosis officer is vastly different from what it was twenty years ago. I am of opinion that the County Council should adopt a scale of salary for its tuberculosis officers of £1,000 rising by £50 to £1,250 with power further to extend this to £1,500 in the case of men of exceptional ability in the Council's service who, by their outstanding work and knowledge have made reputations for themselves in the world of tuberculosis.

36. The routine work now carried out in the best organised clinics is more than enough to occupy the full time of a tuberculosis officer, without leaving any margin for teaching, research, or for giving him opportunity to think and to study the disease in its social aspects. This matter, in my opinion, is one of considerable importance and justifies emphasis. I consider it is very desirable that the service should be developed so that ultimately each tuberculosis officer should have a full-time medical assistant who can be regarded as being in training under him and who can do much of the routine work of the clinic in connection with A.P. refills, supervision of old cases, &c. The salary for the assistant tuberculosis officer, who would probably not hold the position for more than two or three years, might remain at £600 rising to £750, but the increments should be £50, not £30 as at present. This salary, however, may need revision in the light of whatever decisions the County Council may come to with regard to the salaries of registrars and chief assistants at the Council's general hospitals.

Nursing and clerical staff.

37. The present position is that each clinic has a welfare officer and her clerk, and in the three largest there is an assistant welfare officer in addition. Every clinic, with the exception of Tottenham (2), has at least three qualified nurses, variously called "nurse," "sister," "tuberculosis visitor." Their work consists in acting as a clinic sister during consultations and refill sessions; as a propagandist in the district, visiting the households of tuberculosis cases; as a receptionist, who takes names and addresses and arranges appointments, and as a messenger girl who corroborates addresses and carries notification of vacant beds, &c.

38. The considerable development of the Council's anti-tuberculosis scheme in recent years has involved a great extension in clerical work at each clinic. This work is possibly capable of some simplification, and the whole system of record-keeping and analysis of figures in the County tuberculosis service needs critical revision. To enable this to be done, to deal with the volume of recording necessary, and to ensure that the accuracy and painstaking care is devoted to the work which the efficiency of the service and the patients' convenience demands, I consider a clerk of some senior status should be placed in charge of the clerical work at each clinic. The scale of salary at present paid does not go higher than £250 a year. I think the senior clerk in each clinic should be able to rise to a salary of at least £330.

39. There is also a place for a whole-time telephone-receptionist in each clinic, and also for a junior filing clerk who can act as messenger as well. Reference to the increasing scope of the work of welfare officers is made in a later section of the report dealing with rehabilitation.

The existing arrangements for caretakers and cleaning staff are reasonably satisfactory.

Staff for Occupational Therapy.

40. There are many tuberculous patients who are not fit for their usual work, and who either from choice or necessity remain at home for long periods. They often get very bored and despondent. It is for this type of case that occupational therapy is most valuable, and I would like to recommend that an occupational therapist be appointed in the near future to organise occupational therapy within the chest clinic service. Surrey County Council have maintained a service of this character for some years; certain patients who are fit enough meet weekly or fortnightly at a clinic or other available building, and quite a number of bedridden patients are catered for in their own homes.

If the appointment proves a success further staff for this work will doubtless be necessary.

Health of the staff.

41. Every member of the chest clinic and mass radiography staff should have a medical examination to include an X-ray of the chest annually.

INSTITUTIONAL TREATMENT.

42. Opinion has now hardened against the omnibus type of institution where all grades of case lie side by side. In the first place it is uneconomical, for cases in the stage of active intervention need beds backed by a standard of staff and equipment far higher than is necessary for convalescent cases. Secondly, institutions or units where there is much active intervention, where patient after patient is up for an operation, create an atmosphere of tension undesirable for the convalescing case. The atmosphere created by the confirmed chronic and the general regime suitable for this class is bad for the case who can get back to full health. The dying also need accommodating with special consideration. A strong case can be made out, therefore, for beds in graded institutions. The County Council already has attempted, as far as is practicable, to do something along these lines; thus, the beds at Harefield and Clare Hall are mainly reserved for treatable cases needing surgical or other active treatment; in Danesbury the cases are of a convalescent type; the beds in the Council's general hospitals are mainly occupied by the chronic or advanced cases. But a good deal more needs to be done to secure that there should be available to each type of patient institutional accommodation appropriate to his needs.

(*a*) *Beds for Treatable Cases.*

43. The case that is assessed by the tuberculosis officer as treatable in the sense that recovery may be hoped for, should go to an establishment organised and equipped much as are the two hospitals Clare Hall and Harefield. Nearly every case already going to either of these establishments has an operation, and they are well equipped and staffed for the intensive character of the work they perform. Far more beds for this type of case, however, are needed. The Committee are only

too acutely aware of the length of the present waiting list and will doubtless agree that in a disease like tuberculosis a waiting list should not exist, as a patient on recommendation for special hospital treatment should be able to be admitted so soon as he has been able to make his domestic arrangements, say, in about one week, and to enable this to be done a small number of empty beds should always be available.

44. Many of the treatable cases now being maintained in outside institutions could, with advantage, be admitted initially to county beds like those at Harefield or Clare Hall; and it must also be remembered that the better equipment recommended for certain of the clinics will undoubtedly result in a higher proportion of cases being discovered whilst in a treatable phase of the disease. The problem, therefore, is how and where a substantially increased number of beds for treatable cases is to be found.

45. In this connection, consideration needs to be given to the use to which the County Council will put the E.M.S. hutted accommodation at Harefield when after the war this ceases to be required for emergency hospital purposes. It may be well to remind the Committee of the lay-out of the sanatorium and emergency hospital, and the manner in which the beds are at present being used.

In the permanent buildings there is accommodation for 300 adults, 66 children, 18 observation cases. Total, 384.

46. One hundred of these beds have been used since the beginning of the war as a thoracic surgical unit. The emergency hospital, some quarter of a mile distant, comprises 22 wards, each capable of holding 28 tuberculosis cases—this provides reasonably generous spacing between the beds—together with theatre, kitchen, X-ray physiotherapy and occupational therapy departments, staff dining room, library and stores, and an isolation unit of 13 beds. Six of the wards have already been allocated to the County Council for tuberculosis cases and are full.

47. The first question which needs to be decided is whether or not the thoracic surgical unit should be continued after the war and if so, how much provision should be made for this work. The existing unit has functioned most efficiently, has provided a very necessary service, and has established a well-deserved reputation for itself. The middle floor of the main block, with its incorporated theatre and X-ray department, lends itself very satisfactorily to this type of work, and I am of opinion that after the war the thoracic surgical unit should remain and serve the entire County with its population of two million. This, to my mind, would be a better policy than an attempt to develop small thoracic units at several general hospitals in the County. The work is highly specialised and gains in efficiency by being concentrated in one institution. The patients do well in the clean air and open surroundings of Harefield and the small ward units lend themselves most satisfactorily to the nursing of these very seriously ill patients. The admixture of a certain number of cases of a non-tuberculous nature into an institution such as Harefield is, to my mind, an advantage, firstly because it provides a wider variety of interest for the medical and nursing staff, and so helps to attract to and retain in the service good doctors and nurses, and secondly it does something to emphasise that Harefield is a hospital, not merely a sanatorium for the treatment of the tuberculous. In my opinion cases of chest disease and injury in the whole County requiring surgical treatment will certainly need all the 100 beds at Harefield, in addition to the beds at Clare Hall for thoracic surgical work which should continue.

48. With regard to the future use of the 22 E.M.S. hutted wards, the Council's most urgent need at the moment, and one which is likely to be maintained for the next few years, is beds for the treatable case, and although other classes of tuberculous patients have claims for consideration, none of them to my mind is so pressing as that of the early case to whom active treatment offers good prospect of recovery. This, then, is the provision to which I think almost the whole of the hutted accommodation at Harefield should be devoted. Of the 22 ward units, however, probably 4 would need to be appropriated for such purposes as recreation rooms, additional occupational therapy rooms and possibly classrooms if it is found possible to develop some form of educational and cultural training for certain of the patients. This would leave 18 wards of 28 beds each. Two of these, one male and one female, might with advantage be allocated to cases of non-pulmonary tuberculosis in adults, *i.e.*, tuberculous disease of bones, joints, glands, abdominal tuberculosis, &c. For this some special surgical provision would need to be made. There would then remain 448 beds (or 280 more for cases of this type than are treated in Harefield to-day). The total bed establishment of Harefield Hospital would then be :—

	Beds.
Thoracic surgery	100
Non-pulmonary tuberculosis	56
Treatable cases of pulmonary tuberculosis—	
In the main building	200
In the huts	448
Children in the main building	66
Observation cases	18
Isolation unit	13
Total	901

49. It is fully recognised that an institution of this size, mainly for treatable cases of pulmonary tuberculosis, is larger than one would plan if one were building afresh, but the accommodation is in existence and, used in the manner indicated, it would go a substantial way to solve one of the Council's most pressing problems in connection with tuberculosis.

50. Before such a scheme could be implemented, however, additional and much more satisfactory accommodation would need to be provided for the nursing staff. An institution of this size would need more than 300 nurses and the total number of separate bedrooms for nurses in the Nurses' Home and in the annexes thereto at Shepherds Hill House and Manor Court is only 192. It will probably be agreed that in staffing a remote institution like Harefield under post-war conditions, a separate bedroom for each nurse is not too much to ask. Some sub-division of existing rooms might be possible, and if building cannot be carried out, the acquisition of some additional houses in the neighbourhood would seem to be necessary. In this connection also I think a stage has now been reached where the Sub-Committee might consider whether it has become necessary to organise a special recruiting campaign to obtain nurses for Harefield and Clare Hall.

51. The original buildings at Clare Hall were in a worn-out and dilapidated condition before the war, and as long ago as April, 1938, plans had been prepared for their replacement by a modern hospital building of some 600 beds. As in so many other instances the war prevented the accomplishment of this scheme. With the present impossibility of building work and the difficulty of forecasting the County's needs for further sanatoria beds when hospital development again becomes possible, no practical recommendations regarding the rebuilding of Clare Hall can be put forward in this report, but it must be borne in mind that the old buildings cannot last much longer and will almost certainly need to be replaced on the Clare Hall site, or elsewhere or both in the course of a very few years.

52. I would, however, make the definite recommendation that, as in the case of Harefield and for the same reasons, some 50 beds at Clare Hall should be allocated to the treatment of non-pulmonary tuberculosis in adults.

(*b*) *Hospital beds for advanced cases and for assessment.*

53. As pointed out in an earlier section of this report, there is a serious lack of beds for this type of case. In my opinion, the proper place for a patient when going downhill is in the county general hospital nearest to his home, where he can have the consolation of frequent visits from his relatives. It is already established in most of the areas in Middlesex that the tuberculosis officer shall have the status of a consultant physician in the local county general hospital, and direct the treatment of cases in the tuberculosis wards. In my opinion it is desirable that each clinic area should have about fifty beds in the local county hospital under the direction of the tuberculosis officer of that area. Hospital areas and chest clinic areas are not co-terminus; this means that some hospitals will need to have two such blocks, and on the basis of ten clinic areas, and using the existing county general hospitals, the arrangement could be as follows :—

Hospital.	Clinic Area.	Existing Number of Beds.	Additional Tb. Beds Needed.
Chase Farm	1	Nil	50
North Middlesex	1A and 2	(60)*	40 (100)
Redhill	2A and 9	84	16
Central Middlesex	3	34†	16†
West Middlesex	4 and 5	92	Nil
Staines	10	56	Nil
Hillingdon	6	Nil	50

* Destroyed by enemy action but temporarily sited at Clare Hall.
† 60 planned.

54. This would give approximately 50 beds for each proposed clinic area, amounting in all to approximately 500 beds. This appears to me to be the minimum to meet present requirements. The majority of these beds should be planned to accommodate in cubicles or small units the advanced or dying case, and there should be opportunity for patients, when well enough, to get up and sit outside somewhere, for a case may be dying but still able to appreciate such an amenity.

55. Tuberculosis sections in general hospitals should also include a unit for clinical assessment. There are many cases in which the subsequent treatment cannot be advised by the tuberculosis officers on the basis of one or two interviews in the clinics. To some extent this is met to-day by the use of an observation unit at Harefield, but properly speaking this clinical assessment should fall within the province of the tuberculosis officers, and they would much appreciate the opportunity of having this work under their supervision. A general hospital, moreover, is probably a better situation for clinical assessment than a hospital confined to tuberculosis.

(*c*) *Institutional accommodation for the chronic case.*

56. Chronic cases of tuberculosis may be conveniently, if colloquially, divided into two classes—"good chronics" and "bad chronics." The good chronic patient is one who, although he suffers from chronic pulmonary tuberculosis and may be in an infective condition, is nevertheless holding his own, is in reasonably good health and may be capable of useful work if work of a suitable kind can be found for him. He needs, however, rather more care than a healthy individual and, as he may be a source of infection, may need, for the sake of his family, separate accommodation.

57. A bad chronic is one who, though up and about perhaps for most of the day, is unfit for employment (or capable only of spasmodic employment) and is slowly going downhill perhaps over a period of years. At the present time a number of bad chronics occupy hospital beds although they do not need continuous bed treatment, and a small number of good chronics also block hospital and sanatorium beds as they have no suitable home to which to return.

58. Beds for the bad chronic should be available in institutions of a "country house" character, within reasonable visiting distance for relatives. It will not be possible to rehabilitate these patients, but facilities for occupational therapy of a diversional character should be provided to make life more tolerable. An institution of this nature need not be so expensively staffed and equipped as a hospital, but it must be sufficiently comfortable to appear attractive to the patient. It is cases of this type that are most often a danger to the general public, and if they can be kept under some degree of control during their "bad" periods, this danger can be minimised and at the same time the patient's life often be made far less miserable.

Rehabilitation.

59. In that the "good" chronic may often be expected to return to his former work, the problem of the rehabilitation of the tuberculous patient needs consideration at this point.

As I have emphasised in a previous report, the majority of tuberculous patients who can get back to work, can return to their former occupation, provided they are given favoured conditions. Rehabilitation for them is not a matter of special training to learn a new system of muscle co-ordination as is entailed after many accidents. For the tuberculous, rehabilitation commonly means return to their former work along a very easy gradient of short hours and sheltered conditions. For this reason the Ministry of Labour's retraining schemes which necessitate full-time attendance are usually unsuitable for the tuberculous, although they may on occasion help an individual. It is in arranging these favoured conditions in the future that I foresee an extension of the existing clinic welfare service.

60. The Committee may remember that some three years ago I brought forward proposals for the employment of tuberculous persons under sheltered conditions and for short hours, their wages being subsidised by the County Council. The scheme was not proceeded with, as doubt was expressed as to the legality of the procedure. Since that time, the Disabled Persons (Employment) Act, 1944, has become law, though it will not come into operation pending the making of an Order in Council. It is understood the Government will accept responsibility for the rehabilitation and training of disabled persons (including the tuberculous). Section 15 of the Act gives power to the Minister of Labour to provide facilities for the employment of tuberculous or other disabled persons under special conditions; and if he elects, as may well be the case, to exercise his powers through local authorities, acting as his agents, a scheme to give effect to my original suggestion may be possible, and the cost of the scheme would fall upon the Government.

61. The Act also places an obligation upon employers to take into their service a certain quota of disabled persons which, for the purposes of the Act, include the tuberculous. The Council, therefore, may have a two-fold function under the Act; as an employer it will have the duty of employing a certain number of disabled persons including the tuberculous; whilst as an agent of the Minister it may have the power of augmenting the wages of tuberculous persons who, by reason of their physical condition, are only capable of working a limited number of hours a day.

62. The provision of suitable accommodation for the good chronic and for the case who has just left hospital, yet is hardly fit to return to a home where social circumstances are poor, presents considerable difficulty. In certain countries abroad, what is known as the "Night Sanatorium" has been developed, that is to say, an institution situated in a centre of population where the inmates live under a modified sanatorium régime and where they sleep at night. During the day-time, however, they go out to work for short or longer periods, and are able to keep in contact with their homes and friends. In this way the somewhat monastic life of a tuberculosis colony is avoided, with the psychological ills that result therefrom, and at the same time the disadvantages of an abrupt return to ordinary life are overcome.

63. Some modification of this system might be possible of attainment in the more populous parts of Middlesex. What I have in mind are hostels each accommodating, say, 20 patients, where selected cases could live and from which some of them might be able to go out to work. They would be provided with good food and arrangements would be made to supervise their periods of rest. The staffing of such an institution would be simple; a trained nurse would be required as matron, medical supervision would be provided by the tuberculosis officer, and the patients themselves would undertake

some of the domestic work. I have not gone into the question of figures, but if the idea commended itself to the Committee, I would endeavour to obtain from the hospitals and tuberculosis officers some idea of the number of persons suitable for such a type of institution. Consideration could then be given to the setting up of an experimental hostel in one district of the County, and for this purpose it might be possible to acquire one of the sick bays provided for the temporary accommodation of bombed-out sick people. If the arrangement outlined above were to prove satisfactory, the number of such hostels could be increased.

64. In view of the powers conferred upon the Minister of Labour by the Disabled Persons (Employment) Act, it would probably be wise to consult the Minister on this proposal as if approved by him the cost might ultimately be borne by the Government.

65. If the foregoing proposals were adopted the County Council would have institutions of different grades capable of meeting the needs of every type of case. It would be a matter of administration to see that each case was accommodated in the type of bed most suitable for the clinical requirements. The system would be both more elastic and more economical than any at present existing in this country.

Research.

66. As indicated earlier in the report, a unit of the size of Middlesex affords excellent opportunities for research into the many problems connected with tuberculosis. If all the personnel of the service are fully occupied in routine duties, there is not the time for the necessary study that is required to solve these problems. Unless research work of this character is made possible and given adequate support and proper encouragement the standard of the routine work and our general knowledge of how to combat tuberculosis cannot advance. It is therefore strongly recommended that opportunity should be given to members of the Council's medical staff, who show promise as research workers, to carry out some original investigations. It is recommended also that from time to time a proved research worker might be engaged by the County Council to carry out the investigation of an *ad hoc* problem for which he has particular qualifications and provided with the necessary facilities to enable him to do this.

Medical Education.

67. In connection with post-war plans for undergraduate and post-graduate medical education, it is considered that tuberculosis officers have a part to play. I have already received an unofficial request from the dean of one of the London teaching hospitals that the services of one or two of the Council's tuberculosis officers might be used in the teaching of medical students. Such a proposal, in my view, has much to commend it; it should enhance the prestige and efficiency of the Council's tuberculosis scheme, and would, moreover, help to implement the general policy already adopted by the County Council with regard to medical education.

The Mass X-ray Unit.

68. No discussion as to the future of this important new development has been attempted in this report. It has not yet been possible to analyse the results of the first year's work of the County unit. When that is completed, I will submit a separate report on mass radiography to the Committee.

Summary of Recommendations.

Chest Clinics.

(i) As a long-term policy, chest clinics should be sited within the curtilage of a general hospital (Para. 32.)

(ii) A new chest clinic should be established in the Harrow area based on the existing sub-clinic there. (Para. 31.)

(iii) A further chest clinic should be established in the south-western area of the county, and suitable premises should be obtained in or near Staines. (Para. 31.)

(iv) New premises should be found for the Edmonton, Tottenham and Finchley Chest Clinics, and they should be provided with X-ray apparatus and other modern equipment. (Paras. 33, 34.)

(v) Redhill Chest Clinic should be enlarged to approximately double its present size. (Para. 33.)

(vi) Additional rooms should be made available at the Uxbridge Chest Clinic. The gas-cleansing unit which has been built alongside the existing clinic could be adapted for this purpose. (Para. 32.)

(vii) The tuberculosis officer should be on a grade more in keeping with his consultant status. A salary of £1,000 rising by £50 to £1,250, with power to extend to £1,500 is recommended. (Para. 35.)

(viii) Ultimately each tuberculosis officer should work with an assistant tuberculosis officer, salary £600 to £750 by increments of £50. (Para. 36.)

(ix) A senior grade clerk should be placed in charge of the clerical work of each clinic at a salary rising to at least £330 per annum. (Para. 38.)

(x) A telephone-receptionist should be appointed in each of the larger clinics. (Para. 39.)

(xi) An occupational therapist should be appointed for the organization of occupational therapy within the chest clinic service. (Para. 40.)

(xii) A whole-time radiographer and a dark room assistant should be appointed to each clinic where there is an X-ray apparatus installed. (Para. 34.)

(xiii) A junior filing clerk who can be used as a messenger girl should be appointed in the clinics, and an alteration to the grading scheme is necessary to enable this to be done. (Para. 39.)

(xiv) All staff in the chest clinics should have an annual medical examination, to include an X-ray of the chest. (Para. 41.)

Institutional beds.

(xv) A thoracic surgical unit of 100 beds should be maintained at Harefield after the war as part of the County hospital service. (Paras. 46, 47.)

(xvi) A unit of approximately 50 beds (equivalent to two huts) for the treatment of non-pulmonary tuberculosis cases should be established at Harefield. A similar unit should be provided at Clare Hall. (Paras. 48, 51.)

(xvii) The remainder of the E.M.S. huts at Harefield should be absorbed into the accommodation already provided there for treatable pulmonary tuberculous cases. (Paras. 48, 49.)

(xviii) Extra accommodation for nurses should be provided at Harefield and consideration given to a recruiting campaign for nurses at Harefield and Clare Hall. (Para. 50.)

(xix) The old buildings at Clare Hall should be re-built within the course of the next few years. (Para. 51.)

(xx) A unit of approximately 50 beds should be allotted to each chest clinic area at the nearest County hospital, the unit to be under the clinical direction of the tuberculosis officer, and to be used for advanced cases and for assessment of difficult cases. (Paras. 52, 53, 54, 55.)

(xxi) Institutions of a "country house" character, but within visiting distance for relatives, should be provided for the "bad chronic" type of case. (Para. 58.)

(xxii) An experimental hostel should be set up in some populous area to serve as a rehabilitation unit for the convalescing and "good chronic" type of case. (Paras. 62, 63.)

Further recommendations.

(xxiii) As occasion warrants, the County Council should provide facilities for research into problems connected with tuberculosis. (Para. 66.)

(xxiv) Certain of the tuberculosis officers should participate in the teaching of medical students. (Para. 67.)

(xxv) No change is recommended in the existing arrangements for administering the Council's Tuberculosis Scheme.

Venereal Diseases.

Diagnosis and Treatment.—The centres available to Middlesex patients for the diagnosis and treatment of venereal diseases remained the same as in 1944; that is to say, the three clinics established by the County Council at Central Middlesex, Hillingdon and West Middlesex County Hospitals, the clinic financially maintained by the County Council at the Prince of Wales Hospital, Tottenham, within the County and elsewhere the clinics associated with those hospitals participating in the London and Home Counties joint scheme for the treatment of venereal disease.

Below is a comparative statement of the work done at clinics in Middlesex and London hospitals during the past five years, while the table on page 58 gives details of the work of the individual clinics in Middlesex during the years 1941–1945 inclusive.

	Middlesex Patients treated at									
	Hospitals in Middlesex.					Hospitals in London.				
	1941	1942	1943	1944	1945	1941	1942	1943	1944	1945
Number of persons dealt with at the clinics for the first time and found to be suffering from :—										
Syphilis	177	285	325	242	265	176	224	214	160	191
Soft chancre	2	5	1	1	—	5	6	6	2	2
Gonorrhœa	152	261	262	296	368	593	523	348	287	393
Conditions other than venereal	294	726	1,542	1,241	1,455	1,172	1,367	2,186	1,854	2,244
Totals	625	1,277	2,130	1,780	2,088	1,946	2,120	2,754	2,303	2,830
Total attendances ...	16,462	26,959	33,893	27,536	31,006	40,892	43,761	44,160	36,489	35,150
Number of "in-patient" days of treatment ...	*39	*135	*44	*384	616	1,552	1,882	1,137	960	920

* Prince of Wales Hospital, Tottenham only. Figures shown for this hospital include only residents of the County, the costs being borne by the Middlesex County Council under the agreement with the hospital.

An examination of the figures given indicates that the decrease in the number of patients dealt with at the clinics, which was noted last year, has not been maintained. During 1945 there was a sharp rise in the number of cases treated both at the Middlesex and the London clinics. The combined total for the year amounted to 4,918 cases, which exceeded by 34 the highest previous figure which occurred in 1943. Of these, 3,699 cases were found to be conditions other than venereal as compared with 3,728 similar cases in 1943, *i.e.*, 29 *less*. Thus there has been a net increase of 63 in the number of venereal cases treated compared with 1943.

Even these figures may not reflect the true increase in the incidence of venereal disease for there are good grounds for believing that modern methods of treatment by sulphonamide drugs and penicillin, with their rapid symptomatic relief, has resulted in many individuals receiving treatment from general medical practitioners, without making any attendance at a venereal diseases clinic. This is a development which needs very close watching, for it carries a serious risk of patients ceasing to attend for treatment as soon as they are relieved and before cure is complete. In clinic practice defaulting patients are followed up and the importance of their continued attendance stressed, usually with effect, but such facilities are not available in the case of all patients of general practitioners.

	Central Middlesex County Hospital.*					Hillingdon County Hospital.†					West Middlesex County Hospital.‡					Prince of Wales General Hospital, Tottenham.				
	1941	1942	1943	1944	1945	1941	1942	1943	1944	1945	1941	1942	1943	1944	1945	1941	1942	1943	1944	1945
Number of persons dealt with at the clinics for the first time and found to be suffering from :—																				
Syphilis	73	83	132	118	135	30	48	29	40	47	—	74	79	52	53	88	95	100	82	75
Soft chancre	1	2	—	1	—	1	—	—	—	—	—	1	—	—	—	1	2	2	—	—
Gonorrhœa	81	95	110	102	145	1	52	52	72	84	—	35	41	77	86	93	102	83	74	127
Conditions other than venereal	115	287	570	496	609	1	124	250	310	305	—	95	346	306	358	223	295	496	488	602
Totals	270	467	812	717	889	33	224	331	422	436	—	205	466	435	497	405	494	681	644	804
Total attendances	4,745	10,672	14,686	14,967	14,590	99	6,628	4,624	4,904	7,413	—	2,334	4,909	4,313	6,910	14,045	9,255	11,465	8,194	6,696

* Clinic opened April, 1941.

† Clinic opened December, 1941.

‡ Clinic opened May, 1942.

Social Service.—The arrangements for the follow-up of contacts named under Defence Regulation 33B were continued in 1945. During the year, notifications relating to 196 contacts were received, of which 171 were single notifications, whilst 25 indicated that the persons concerned were responsible for the infection of two or more patients. In the case of single notifications, 134 were traced, 114 agreed to attend a clinic for examination, and 8 moved to other areas.

Notifications were mostly received from medical officers of the United Kingdom, Allied and Dominion Forces, and it was remarkable how careful and accurate was most of the information received, and in this county the number of false addresses were surprisingly few. The Special Services Almoner continued to find contacts co-operative and the fear sometimes expressed that they would be resentful does not seem to be borne out by experience. In order to ensure their co-operation the visitor must do her utmost to avoid friends or relatives discovering the reason for the enquiry. Once it is established that the address is correct, repeated visits are often replaced by a discreet note suggesting that the contact should telephone for an appointment, and a time and meeting-place are then arranged to suit the contact. Most women—and notifications relate largely to women—seem quite willing to fix an interview, even though they may not have any idea why it is requested.

These visits and interviews made it very difficult to maintain continuity in attendance on the part of the almoner at the special clinics in the county hospitals, especially as contacts often required escorting to hospital on their first attendance. In March, 1945, the County Council agreed to the appointment of a second almoner, and a temporary almoner was appointed until Mrs. Freda Carling joined the established staff in September, 1945.

With two almoners it was possible to deal expeditiously with notifications and for one or other almoner to attend almost all the sessions in the clinics at the county hospitals, as well as those held at the Prince of Wales Hospital, Tottenham. This provided a much more satisfactory service, and the almoner could attempt to deal immediately with the social crises which are likely to be revealed in clinics. During clinic sessions, she also wrote letters to defaulting clinic patients. 410 visits were paid to patients who failed to attend the clinics, and were requiring urgent treatment. With the use of penicillin treatment for syphilis some patients required following-up in order to ensure that they maintained the necessary period of supervision following intensive treatment.

Venereal Disease Propaganda and Sex Education.

The County Council makes an annual contribution to the funds of the Central Council for Health Education, on the basis of five shillings per thousand of the population, in consideration of that Council's work in the education of the public regarding the dangers of venereal disease and in the dissemination of information concerning sexual hygiene. One-sixth of the total contribution is credited to the County Council against the cost of providing talks and lectures and the supply of literature.

The Central Council for Health Education has submitted the following account of the work carried out in Middlesex during the period 1st April, 1945, to 31st March, 1946:—

"The total number of meetings undertaken during these twelve months was 222.

The bulk of the meetings consisted of courses of lectures on sex education to young people and talks to parents of school children and to various women's groups. At the beginning of last year we circularised various women's co-operative guilds and women's institutes, offering talks on sex education, venereal disease and general health and early this year the head teachers were circularised through the Middlesex Head Teachers' Association with suggestions for courses of lectures to parents. The response to both these circularisations is proving satisfactory.

In addition a number of talks on sex education and venereal disease was given to members of the W.R.N.S., a few similar talks were held last summer for N.F.S. personnel, showings of health films were given to Messrs. Hoovers, Ltd., of Perivale, Messrs. Smith's, of Cricklewood, and Messrs. Specialloid, Ltd., Finchley, and we assisted with films, literature and lectures at a 'Health Week' in Southall and at British Red Cross Exhibitions at Wembley and Hornsey."

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